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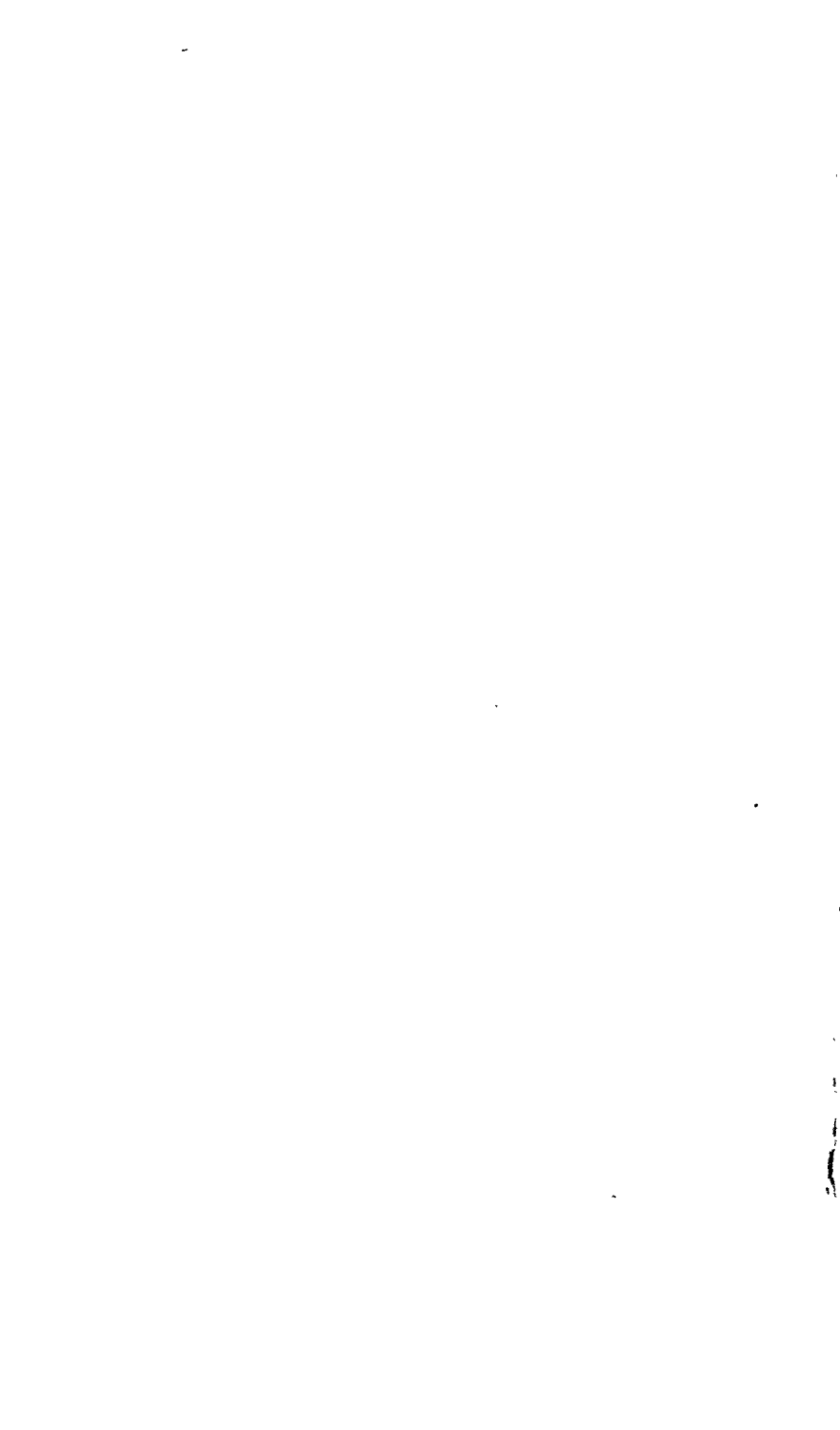
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OF
GREAT BRITAIN AND IRELAND



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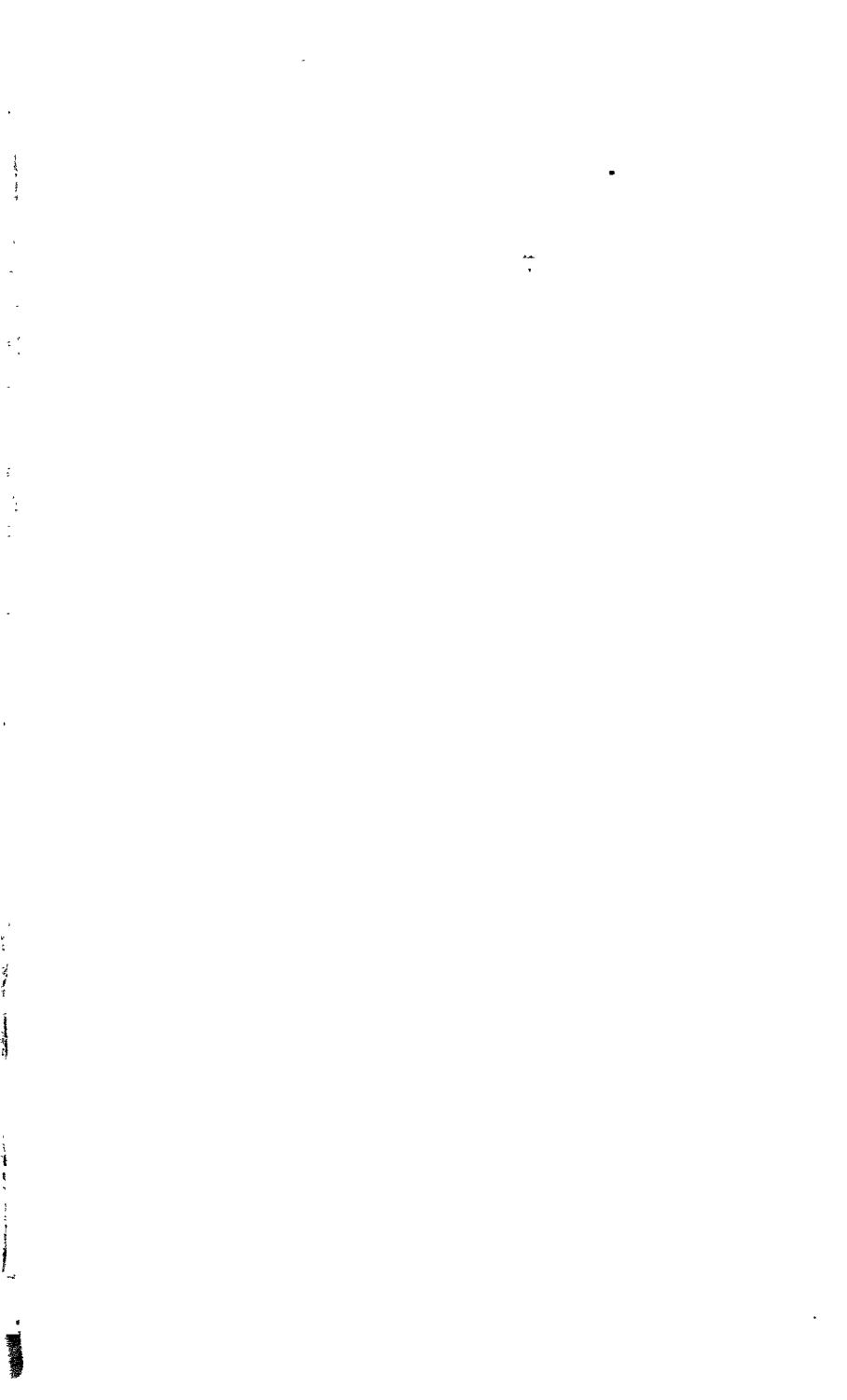
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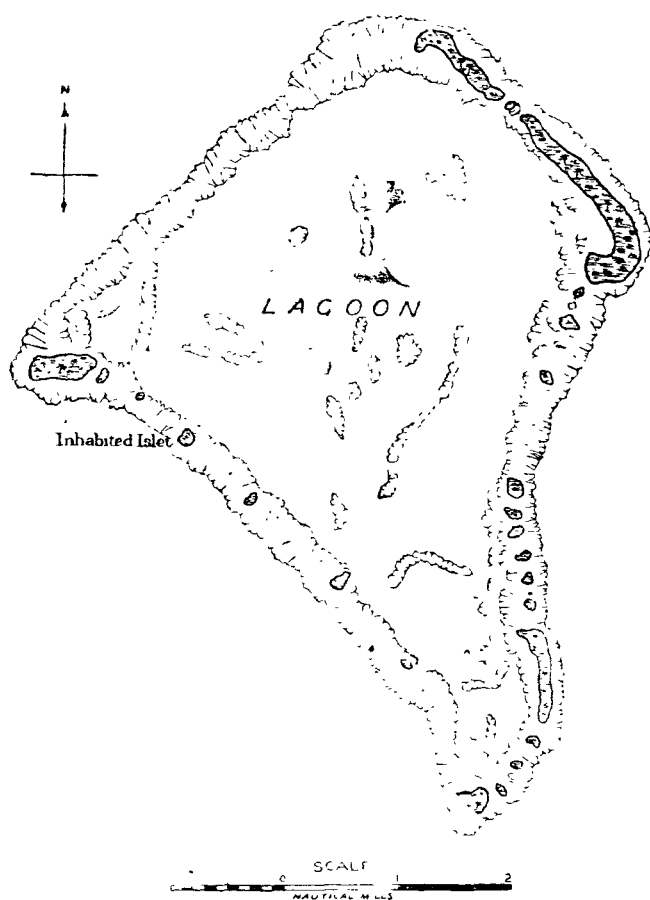
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ERRATUM.

Page 82, line 6 from bottom, for "*femor*" read "*femur*."





FAKAOFU (BOWDITCH ISLAND).
From Survey of H.M.S. Egeria, 1880.

THE JOURNAL
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ANTHROPOLOGICAL INSTITUTE
OF
GREAT BRITAIN AND IRELAND

FEBRUARY 10TH, 1891.

EDWARD B. TYLOR, Esq., D.C.L., F.R.S., *President, in the Chair.*

The Minutes of the last meeting were read and signed.

The following elections were announced :—

GEORGE REDWAY, Esq., of 57, Ludgate Hill, E.C.

MISS NINA F. LAYARD, of 11, Museum Street, Ipswich.

The following presents were announced, and thanks voted to the respective donors :—

FOR THE LIBRARY.

From SIR JOHN LUBBOCK.—*Beröringer mellem de finske og de baltiske litaunisk-lettiske Sprog. En sproghistorisk Undersøgelse af Vilh. Thomsen. 4to. Kobenhavn, 1890.*

From the UNITED STATES NATIONAL MUSEUM.—*A Collection of Stone Implements from the District of Columbia. By S. V. Proudfit. 8vo. Washington, 1890.*

— *Throwing-sticks in the National Museum. By Otis T. Mason. 8vo. Washington, 1890.*

— *A Study of the Eskimo Bows in the U.S. National Museum. By John Murdoch. 8vo. Washington, 1890.*

— *Basket-work of the North American Aborigines. 8vo. Washington, 1890.*

- From the GOVERNMENT OF NEW ZEALAND.—Statistics of the Colony of New Zealand for the year 1889. Fol. Wellington, 1890.
- From the SUPERINTENDENT OF CENSUS, U.S.A.—Census Bulletin. Nos. 16, 19. 4to. Washington, D.C., 1890.
- From GEORGE W. BLOXAM, Esq.—A Short Account of Further Bushman Material collected. By L. C. Lloyd. Fol. London, 1889.
- From the PUBLISHER.—Primitive Folk. By Elie Reclus. 8vo. London. Walter Scott.
- Crania Bohemica. von Mudr. Heinrich Matiegka. I. Theil. 8vo. Prag, 1891. Fr. Haerpfer.
- From MESSRS. KEGAN PAUL, TRENCH, TRÜBNER & Co.—The Antiquities of the State of Ohio. By Henry A. Shepherd. 4to. Cincinnati, 1890.
- From the AUTHOR.—Notes on a Finnish Boat, preserved in Edinburgh. By David MacRitchie. [From the Proceedings of the Society of Antiquaries of Scotland.]
- Formation des variétés Albinisme et Gauchissement. par G. de Mortillet. [Extrait des Bulletins de la Société d'Anthropologie de Paris, 1890.]
- Il terzo trocancere la fossa ipotrocanterica la cresta ipotrocanterica nel femore dell'uomo. Tesi di Laurea del Dottore Pietro Costa. [Estratto dall' Archivio per l'Antropologia e la Etnologia, 1890.]
- From CTE. A. MAHÉ DE LA BOURDONNAIS.—Mémoires historiques de B. F. Mahé de la Bourdonnais. 8vo. Paris, 1890.
- From the KAISERLICHE LEOPOLDINISCH-CAROLINISCHE DEUTSCHE AKADEMIE DER NATURFORSCHER.—Verhandlungen. Band liv.
- From the ACADEMIE DES SCIENCES DE CRACOVIE.—Bulletin International. 1890. Nr. 10.
- From the ROYAL COLLEGE OF PHYSICIANS, EDINBURGH.—Reports from the Laboratory. Vol. iii.
- From the ROYAL UNITED SERVICE INSTITUTION.—Journal. No. 156.
- From the K.K. NATURHISTORISCHES HofMUSEUM. Annalen. Separatabdruck aus Band v. Heft 4.
- From the SOCIÉTÉ ARCHÉOLOGIQUE, AGRAM.—Viestnik hrvatskoga Arkeologičkoga Družtva. Godina xiii. Br. 1.
- From the ROYAL SCOTTISH GEOGRAPHICAL SOCIETY.—The Scottish Geographical Magazine. Vol. vii. No. 2.
- From the ROYAL SOCIETY.—Proceedings. No. 299.
- From the SOCIETY OF BIBLICAL ARCHÆOLOGY.—Proceedings. Vol. xiii. Part 7.
- From the ANTHROPOLOGISCHE GESELLSCHAFT, VIENNA.—Mittheilungen. Band xx. Heft 3 u. 4.
- From the ANTHROPOLOGICAL SOCIETY, WASHINGTON.—The American Anthropologist. Vol. iii. No. 4.
- From the SOCIETY OF ARTS.—Journal. Nos. 1991-1994.
- From the ROYAL STATISTICAL SOCIETY.—Journal. Vol. liii. Part 4.

- From the EDITOR.—Science. Nos. 413–417.
— American Antiquarian. Vol. xiii. No. 1.
— Nature. Nos. 1107–1110.
— Revue Scientifique. Tome xlvii. Nos. 3–6.
— The Monist. Vol. i. No. 2.
— Physique. Vol. i. No. 1.
— The Journal of Heredity. Vol. vi. No. 1.
-

Mr. G. M. ATKINSON exhibited some sketches of horse ornaments, symbolic survivals.

Mr. MARTIN suggested that the “fish” on horse ornaments coming from Delhi were probably the arms of Oudh—on the gates of Lucknow the fish figures largely—and this ornament would probably prevail in Oudh, from whence it would be conveyed to neighbouring cities.

The PRESIDENT remarked on the great variety of pattern development disclosed by Mr. Atkinson’s long and patient copying of a class of designs which would be generally thought of but little range. In his opinion the next step in utilising this material could be best taken by Mr. Atkinson endeavouring to arrange the whole series of drawings in such a way as to trace the possible development of each pattern from those preceding it, so as when possible to arrive in each case at the natural object originally represented.

Mr. LEWIS also joined in the discussion.

Mr. RAY read a paper on the People and Languages of New Ireland and the Admiralty Islands, upon which Dr. CODRINGTON made some remarks.

*Note on the PEOPLE and LANGUAGES of NEW IRELAND and
ADMIRALTY ISLANDS.*

By SIDNEY H. RAY.

(From letters of the Rev. R. H. RICKARD.)

THE vocabularies here given were sent to me last year by the Rev. R. H. Rickard, of the Wesleyan Mission in New Britain. They were collected by him at Nusa, on the northern extremity of New Ireland, and at Green Island, in the Admiralty Group, in December, 1886, during an excursion round the Bismarck Archipelago, made from the mission head-quarters at Kabakada in the Gazelle Peninsula, New Britain. Mr. Rickard has joined to these a short list of words from the Western end

of New Britain, opposite Huon Gulf, and for the sake of comparison I have added the equivalents in the two best known languages of the region, those of Raluana and Duke of York Island.

An account of the New Ireland natives was read before this Institute, in 1886, by Mr. A. J. Duffield, as a supplement to which I condense the following from Rev. R. H. Rickard's letters.

Nusa.—The people are nearly nude. The women wear an apron or leaf not larger than a leaf of the Australian gum tree, and long peaked hats made of pandanus leaves sewn together. The men blacken half only of the top and bottom row of their teeth, or in some instances half the top row and the opposite half of the lower. The men also shave parts of their heads, leaving various shaped locks—triangular, diamond shaped, &c. A chief's wife came on board the vessel *alone*, a thing which would never have taken place in New Britain, and which points to a low state of morals.

Fisher Islands and St. John's Island.—The people here are the same as at Nusa, speaking the same language and having the same customs. They live in large villages. All the natives of this district are notorious cannibals. In one place Mr. Rickard was assured that a tribe lived by fighting for any party who might hire them, the only payment sought being the bodies of the slain.

Faed Group.—These consist of two circular lagoons about four miles apart, with several islands, but only one group is inhabited. Cocoanut palms are abundant, but the population is small (about 200) and is fast dying out. The natives are light brown Polynesians, speaking a language allied to that of Lord Howe Islands and Stewart Islands. A Samoan could understand them in a very short time. The islanders are ruled by one man, and are in a very miserable condition, with small huts and untidy plantations.

Carteret Islands.—The people here are black Melanesians, speaking the language of Buka (Solomon Islands).¹ They are in as wretched a condition as the Faed Islanders.

In the Journal of the Institute for 1877 will be found a detailed account of the natives of the Admiralty Group by Mr. H. N. Moseley, the naturalist to the Challenger expedition, chiefly relating to D'Entrecasteaux Island and Wild Island. I extract the following from Mr. Rickard's letters:—

Admiralty Group:—"The men were quite nude, with long

¹ Buka Vocabularies are given by H. Zöller—"Petermann's Mittheilungen," 36 Band, 1890, p. 127; and by C. W. Woodford—"A Naturalist among the Head Hunters," p. 225.

combed hair, in which is carried a comb. They are of average height, none of them stout, with sharp Jewish countenances; their skin more coppery and bright than that of the New Britain natives. They were keen traders, the articles most in request being knives, carpenter's tools and beads. They gave in exchange flint-pointed daggers and spears, carved bowls, ornamented gourds, large clay cooking vessels, and other articles. In the island of Waikatu the houses were built on piles driven into the rock. Some of these piles were eighteen inches thick and about eight feet above the water. One house stood on thirty or forty piles, and was about fifty or sixty feet long, twenty feet wide, and ten feet high. At each end was a large shutter. A loft contained the inmate's household treasures, which consisted chiefly of bowls and clay pots filled with oil. The floor of the house was formed of the thick outer shell of a palm, and was reached by a ladder from the platform near the water.

"The canoes of these islands are built of strong timber, with a heavy but neat outrigger one side and a slanting platform on the other. They have a house on deck, and carry fire, food, and cooking utensils."

(A detailed account of these canoes, with diagrams, was given by Mr. Moseley, see "*Jour. Anthropol. Inst.*," vol. vi.)

While Mr. Rickard was at Waikatu one of the king's wives lay dead. The corpse was embalmed in oil, and after it had lain ten days the skull would be scraped and cleaned, the remainder of the body being buried.

The women wore grass petticoats, and seemed to have a good position among the men.

The government seemed to be in the hand of one chief, as in Fiji, and not as in New Britain. The men of the whole village received their food from the chief, and the houses were built collectively for the use of all, not as in New Britain, by a man and his wife alone. The chief's word was immediately obeyed. A boy wished to go away with Mr. Rickard's party, but the chief's refusal stopped him.

VOCABULARIES FROM NEW IRELAND, NEW BRITAIN, AND ADMIRALTY ISLANDS.

- 1.—"Nusa, north end of New Ireland." By Rev. R. H. Rickard.
- 2.—"Raluana, Gazelle Peninsula, New Britain." From prayer books of the Wesleyan Mission.
- 3.—"West end of New Britain and coast of New Guinea opposite." By Rev. R. H. Rickard.
- 4.—"Duke of York Island between New Britain and New Ireland." From the Rev. G. Brown's dictionary.
- 5.—"Green Island, Admiralty Islands." By Rev. R. H. Rickard.
- 6.—"Wild Island, Admiralty Islands." By H. N. Moseley. "*Journal Anthropol. Inst.*," vol. vi, pp. 387-390.

I.

English.	Nusa.	New Britain.		Duke of York Island.
		Raluana.	West End.	
<i>Persons—</i>				
1. Man	tawan	tutana ....	....	muana.
2. Woman	naina	vavina ....	....	tebuan.
3. Boy	nalakai	bul ....	....	net.
4. Ear	talanga-ra	taliga ....	....	taliga.
5. Eye	matagi	mata ....	....	mata.
6. Foot	kaka	kaki ....	....	kaki.
7. Hand	biti-ra	lima ....	....	lima.
8. Nose	aisu-rak ....	....	....	gigiro.
9. Tooth	gisa-ra ....	....	....	lakono.
<i>Natural Objects—</i>				
10. Bamboo	karisi ....	....	....	kauru.
11. Bird ....	....	beo	manu	pika.
12. Cape (point of land) ....	....	....	tubis	kilkil.
13. Coconut ....	....	lama	niu	lama.
14. Day	ayas	bug, keake...	....	bug, keke.
15. Earth ....	....	qunan	magamaga...	bual.
16. Feather	ugi ....	....	....	lakua.
17. Flow of tide	lubu-lubu	lubu ....	....	lubu.
18. Lime ....	....	kabag	wavu	kabag.
19. Rain	lengit	bata ....	....	bata.
20. Reef ....	....	mama	mama	luntaura.
21. Sea	laman	ta	das	tai.
22. Smoke ....	....	mi	tabui	mi.
23. Taro ....	....	pa	mawa	pa.
24. Water ....	....	tava	nanus	danim.
25. Wind	are	vuvu	vivili	dadaip.
26. Yam ....	....	....	wavua	up.
<i>Implements—</i>				
27. Armlet....	....	lalai	sasa....	lalai.
28. Canoe	tabul	waqa ....	....	aka.
29. House ....	....	pal	luma, bali	ruma.
30. Outrigger	saman ....	....	....	aman.
31. Spear ....	....	rumu	gata	bele.
<i>Verbs—</i>				
32. Come	ki lako mai	arikai ....	....	wan pat.
33. Overturn	ki lilus	tapuku ....	....	tapuku.
34. Row (in boat) ....	....	....	voli ....	....
35. Sing ....	....	kakaile	toala	kelekele.
36. Sit ....	....	ki	uqu....	ki.
37. Speak	karar-ate	tata....	....	piri.
<i>Adjectives—</i>				
38. All ....	....	vura	pulus	rap.
39. Bad	ki ong ....	....	....	akakai.
40. Good	ki roa	boina ....	....	awakak.
41. Sick	malabeng	mait ....	....	malapag.
<i>Miscellaneous—</i>				
42. No	kavek	pata ....	....	pate.
43. Yes	hei ....	....	....	id, maio.

(NOTE.—In Ralwana and Duke of York Island, *k*=hard *g*, *g*=ng, *q*=ngg.)

II.

English.	Green Island.	Wild Island.
<i>Persons—</i>		
1. Man	simat	hama.
2. Woman	pen	bibi.
3. Boy	akamel	naru.
4. Armpit	po-lokai	bui (=arm or leg).
5. Back ..	lakului.	
6. Breast	esus.	
7. Buttocks	ekui.	
8. Ear	talingai	darinya.
9. Eye	bo-mitai....	manna.
10. Foot	kekai.	
11. Hair	epalai	langam-pui.
12. Lip	po-ngusi.	
13. Stomach	putuai	lau.
14. Throat	koloi.	
15. Tongue	kalalame	arime.
16. Tooth	eliai	livo.
<i>Natural objects—</i>		
17. Beach ...	lokol.	
18. Bêche-de-mer ...	monai.	
19. Betel-nut	bue	mbung.
20. Bird	manuai.	
21. Day	uni.	
22. Fire	kalufai.	
23. Fish	eni	uke.
24. Moon ...	abul.	
25. Pig	apu	po.
26. Reef	lau.	
27. Swell of the sea ...	londras.	
28. To-morrow	lankiau.	
29. Water....	wai	wai.
30. Wind	eses.	
<i>Implements—</i>		
31. Armlet	elal	lan.
32. Axe	coloi	samil.
33. Beads	waiap	bujam.
34. Canoe....	landrol	doan.
35. Chisel....	toboni.	
36. Cloth	riap	orlau.
37. Comb	etu.	
38. Fish-hook	eku.	
39. House	eum.	
40. Mirror	panabul.	
41. Spear	salau.	
42. Tortoise-shell ...	pusi-boin	bue-bu.
<i>Verbs—</i>		
43. Come	egi mi.	
44. Fight	pitilu.	
45. Go	toloko.	

English.	Green Island.	Wild Island.
<i>Adjectives—</i>		
46. Bad	mahan.	
47. Good	wian.	
48. Dead	e mat.	
49. Large	mendian.	
50. Plenty	solowon.	
51. Sick	mati.	
52. Small	liin.	
<i>Miscellaneous—</i>		
53. Thus (like this)	dido.	
54. No	eboin.	
55. Yes	owa	u.

III.—NUMERALS.

	Nusa.	Raluana.	West New Britain.	Duke of York Island.	Green Island.	Wild Island.
1	sahai	tikai	tasi	ra ...	e si ...	sip.
2	pa-ua	aurua, evut	lua	ruadi ...	e lua ...	huap.
3	pa-tul	a utul	tolu	tuldi ...	e talo ...	taro.
4	po-iat	a ivat	iva	watdi ...	keo ...	vavu.
5	pa-lmit ...	a ilima ...	lima ...	limadi ...	e lima ...	lima.
6	....	lap-tikai...	pan-tas ...	nomdi ...	e wono ...	wono.
7	....	lav-urua ..	panti-lua ..	limadi-ma- ruadi	ratalo ...	he-tarop.
8	....	lav-utul ...	pan-tulu ...	limadi-ma- tuldi	andra-lua	anda-huap.
9	....	lav-uwat	alasue	limadi-ma- watdi	andra-si ...	anda-sip.
10	sangulung	arip	savulu	noina	sangaul	sangop.
20	....	a ur arip	lua savulu	ru noina ...	lokon ...	hungop.
30	....	a utul arip	....	tul a noina	trongol ...	
100	....	a mara ....	....	a mara	sangol ...	

IV.—NOTE ON THE NUSA AND WESTERN NEW BRITAIN
VOCABULARY.

1. *tawan*=Motu and south-east New Guinea *tau*, male; 2. *naina*, probably an article *na*, and *ina*, a form of *hina*, *sina*, a common word=female; 4 and 5. common words; 6. *kaka*, probably=sole of the foot, and may be connected with words meaning "hand" (stretched out) in Solomon Islands, &c. (Codrington, Melan. Lang., p. 75, and Gabelentz and Meyer, Melan. Sprach., p. 433); 7. *biti* probably=finger, New Hebrides and Banks Island *pisu*, *pusi*, Swallow Island *bisi*, Savo *bizi*; 8. *aisu*=New Guinea, South Cape *isu*, Solomon Islands *isu*, *ihu*, &c., New Hebrides *ngisu*, *ngusu*, &c.; 9. *gisa*=New Guinea, Motu *isu*, Kabadi *nise*, Maiva *nihe*; 8 and 9 are probably from the same root, originally meaning "point"; the last three words and word for "ear" show a

suffix *ra*=their; 13. *niu* is a common word, *lama* in Samoan is the candle-nut tree; 14. *ugi*=Motu and south-east New Guinea *hui*=“hair” or “feather”; 18. *wavu*=Wild Island *war*, Motu *ahu*; 19. *lengit*=San Cristoval *rangi*, from a common root meaning “sky”; 20. *mama* is probably the water above the reef, Duke of York Island *mama*, shallow water; 21. *laman*=Banks Island and Aurora *lam*, &c.; *tas*, *tai*, *ta*, a common word for “salt” or “salt water;” 24. *nanus*=Motu *ranu*, a widely-spread word for “fresh water”; 25. *vivil*=Motu *hikiria*, to blow with the mouth; 29. *luma*=Caroline Islands, Kusaie *lom*, the common word, *ruma*; *pal*, *bali*=the Polynesian *fale*; 30. *saman*=Samoan “float of outrigger,” *samani*, or outrigger, *ama*, Banks Islands *sama*, Fiji *dhama*; 32. *lako mai*=Fiji *lako mai*, New Guinea Motu *laka*, to walk, go; 39. *ong*=Loyalty Island, Iai *kong*; 40. *boina*, probably=common *wia*; 41. *malabeng*=New Guinea, Aroma *raba*, Kerepunu *rava*, bad, with prefix of condition, *ma*; *mait*=Loyalty Islands, *mech*, ill, connected with root, *mate*, dead; 43. *hei*=common south-east New Guinea, *ea*, *e*, *aia*, &c.

V.—NOTE ON THE GREEN ISLAND VOCABULARY.

1. *mat*=probably *matua*, &c.=grown up, *si* is numeral “one”; 2. *pen*=Mefoor, *tien* Macley Coast *pain*, &c.; 6. *esus*=New Guinea, South Cape *susu*, Polynesian *susu*; 8, 9, 10, common words; 11, *po-ngusi*=Fiji *ngusu*, lip; see 8, 9 in foregoing note; in 4, 9 and 12, the prefix, *bo*, *po*, may be compared with Epi *po-mena*, Loyalty Islands, Iai *bo-men*, tongue, where *mena* is the common word for tongue, and *bo*, *po* are unexplained; 15. *kalalame*=Duke of York Island *karama*; 20, *manuai*=common root, *manu*; 22. *kalufai*=South-east New Guinea *iruva*, *arova*, &c.; 23. *eni*=Duke of York Island *ian*, New Britain *ien*; 24. *ubul*=Fiji and Florida *vula*, Banks Island *vul*, *vol*, &c.; 25. *apu*=common *bue*, &c.; 29. *wai* is common word for water; 34. *landrol*=Efate, Nguna, New Hebrides, *larua*; 36. *riap*=*siapo*, cloth made from paper mulberry, common in Polynesia; 39. *eum*=common *ruma*; 45. *loko*=Fiji *lako*, Caroline Islands, Ulia *lako*, New Guinea Motu *laka*; 47, 48, *wia* and *mat* are common words; 51. see foregoing note on Nusa (41); 52. *liin*, a form of the common, *liki*, *riki*.

VI.

The numerals call for no special remark. They are formed according to the imperfect decimal notation of Dr. Codrington (Melan. Lang., p. 224), with prefixes for the numbers from 6 to 9, and the common *sangarut*=10. The correspondence of the Raluana prefix *lar* with the same in Banks Island is worthy of note. In Green Island *andra* probably=minus, and *andra lua*, *andra si*=less 2, less 1.

About 74 per cent. of the Nusa words here given agree with Melanesian forms. The proportion in the other vocabularies is not so large, being 67 per cent. in the list from Western New Britain, and about 56 per cent. in Green Island. In these notes I have only pointed out the most obvious agreements, but there is no doubt that closer investigation and a better knowledge of the languages of the Solomon Islands will prove more clearly the close connection of these languages with the Melanesian. The original speech of the natives of the New Guinea mainland may or may not belong to the Melanesian family, but it seems clear that Melanesians have taken possession of the islands around the eastern extremity, as well as of the south-eastern shores.

I may perhaps be allowed to add a few remarks upon what has already been written upon the languages of this neighbourhood. The Nusa words vary considerably from those of other parts of the same island. In three New Ireland vocabularies, given by Schellong,¹ only eight words agree with the Nusa, and although Rook Island is close to the western end of New Britain, only six words are the same in the list here given, and the one given by Zöller² for Rook Island.

Mr. H. N. Moseley³ pointed out a few agreements between the words in his vocabulary from D'Entrecasteaux and Wild Islands, and the Fiji, Polynesian, and New Hebrides, but sought to connect the language with the Yap of the Caroline Islands rather than with the Melanesian. The chief point of agreement with the Yap, as he showed, is in the formation of the numerals for eight (*anda huap*, *andra lua*) and nine (*anda sip*, *andra si*) by subtraction, *anda* and *andra* apparently meaning "minus," and *huap* and *sip* being the words for two and one. In Schellong's vocabulary for Admiralty Islands the same formation appears, seven being *sua-tolo*, eight *shua-luea*, nine *shu-ri*, and *tolo*, *luvea*, *ri* the words for three, two, and one. These Admiralty forms correspond to the Yap *me-delip*, seven; *me-ruk*, eight; *me-rip*, nine; from *odalip*, three; *lakrue*, two; *darip*, one. This formation is not found in other languages of the Caroline Islands.

A vocabulary of twenty-five words from Elizabeth Island in the Admiralty Group is given by Zöller:—

Ear ....	.....	<i>rellingai</i> .
Eye ....	.....	<i>boromodai</i> .
Head ....	.....	<i>we-mhalai</i> (cf. Green Island, <i>hair</i>).
Betelnut ....	.....	<i>mbung</i> .
Cocoanut ....	.....	<i>eniu</i> (niu, Moseley).
Fire ....	.....	<i>fonoan</i> .
Fowl ....	.....	<i>koko</i> .
Moon ....	.....	<i>kayo</i> .
Pearl ....	.....	<i>boyap</i> (=bead of Green Island).
Sun ....	.....	<i>mata-malei</i> .
Tree ....	.....	<i>epap</i> .
Water ....	.....	<i>eboe</i> .
Yam ....	.....	<i>malen</i> .
Bad ....	.....	<i>moan</i> .
Good ....	.....	<i>nyna</i> .
Large ....	.....	<i>mendrian</i> .
Little ....	.....	<i>eliyin</i> .
Boat ....	.....	<i>ekan</i> .
Spear ....	.....	<i>pattilau</i> .

¹ "Die Jabim-Sprache der Finschhafener Gegend (N. O. Neu Guinea)," von Dr. O. Schellong, Leipzig, 1890.

² "Petermann's Mitteilungen," 36 Band, 1890, v, p. 127. "Untersuchungen über 24 Sprachen aus dem Schutzgebiet der Neuguinea Compagnie," von Hugo Zöller.

³ "Journ. Anthropol. Inst.," vol. vi, 1877, p. 379.

1	....	....	....	<i>e si.</i>
2	....	....	....	<i>e tuo.</i>
3	....	....	....	<i>e dalo.</i>
4	....	....	....	<i>e a.</i>
5	....	....	....	<i>e lema.</i>
10	....	....	....	<i>sangon.</i>

(Words in italic agree with Rev. R. H. Rickard's list.)

In twenty words common to the Green Island and Elizabeth Island vocabularies fifteen are the same. Two other vocabularies from the Admiralty Islands are given by Schellong. The exact locality to which the first belongs is not stated, and it only contains a few words which agree with Mr. Rickard's vocabulary. The second is said to be from Green Island, but with a note¹ which shows that it was obtained from a native on a trading vessel. It does not represent the language of Green Island, although a few words are the same. If it is the language of any particular district it belongs to the island of Buka, in the Solomon's. A vocabulary given to Mr. C. W. Woodford,² by his boy Hogare, as the language of his native village of Lehona, Buka Island, is nearly identical with Schellong's language of Green Island. The Buka vocabulary of Zöller also closely agrees with it. The following extract from Schellong shows how widely his two vocabularies differ from Rev. R. H. Rickard's:—

	Admiralty.	(?) Green Island.
Man	kimeala	(o)zon.
Woman	pali	* taho(a)l (mother, in Buka).
Belly	pekeptin	bussusse.
Breast	shurun	ssussuge.
Ear	chianin	
Eye	mutuan	namatagu.
Foot	kanishihin	maü.
Hair	lamupuluan	
Tooth	ihin	* liho.
Bird	shakuhia	(a)pianne (ban, Moseley).
Fire	i	tole.
Fish	ni	* aienne.
Moon	pul	* tzehau.
Pig	pou	* pauu.
Water	ua	* ramun.
Boat	shuala	* heulu (tree in Buka).
House	etiau	* luma.

¹ "Green Island; Leute, die von der östlich des Bismarck-Archipels gelegenen Insel Gr, sowie von den Salomoninseln und Neu-Hebriden stammten, befanden sich an Bord eines Schooners als Bootsmannschaft; eine Verständigung gelang mit Hilfe des Pitchen-English."—Die Jabim-Sprache, p. 104.

² "A Naturalist among the Head Hunters," by C. M. Woodford, London, 1890, p. 225.

		Admiralty.	(?) Green Island.
Spear ....	....	sapi	* ssaka.
Dead ....	....	tschumiake	(i)mat.
Large ....	....	mushiahah	* ekapan.
Sick ....	....	hasiin	(he)mate.
Small ....	....	kape	tetenne.
Yes ....	....	nemui	ha.
No ....	....	poi	* mo(ā).
1 ....	....	ri	* toe.
2 ....	....	luea	* hul.
3 ....	....	tolo	* piere.
4 ....	....	ahu	* haets.
5 ....	....	limia	* lima.
6 ....	....	ona	* monomo.
7 ....	....	sua-tolu	* mohet.
8 ....	....	shua-luea	* to(u)el.
9 ....	....	shu-ri	* ssie.
10 ....	....	runva	* malatto.

Words in italics agree with Rev. R. H. Rickard's list, those marked (*) agree with the Buka of Woodford and Zöller. Besides these the words for star, sea, cocoanut, cockatoo, finger, and skin, in Woodford, and for eat, village, and yam, in Zöller, are the same as in Schellong's so-called Green Island.

DISCUSSION.

Dr. CODRINGTON said: Mr. Ray's comments on these vocabularies touch on most of the points on which my own knowledge of the Melanesian words could be brought to bear, but there are two or three words in his lists which I should like to notice. 1. In the Raluana list 27, armlet is *lalai*, as it is in Duke of York's Island, and the same name for the same thing appears in the Green Island, list 31, as *elal*. In the Banks' Islands an armlet made of a particular shell is *lala*, because the shell is *lala*. It is probable, considering that words in vocabularies are generally obtained by pointing to some particular object, that the armlets in Raluana, Duke of York Island, and Green Island, were formed of that shell, which indeed is very commonly used for that ornament. The identity of the word then is fixed rather as applying to the shell than to the ornament; and, if this be so, it is plain that the common possession of a name for a species of mollusc in the Bismarck Archipelago and the Banks' Islands shows more evidence of common language than the presence of a word which might have been introduced with the use of the ornament. 2. In the Green Island list, 13, stomach is *putuai*; this may be the Banks' Islands *putoi*, navel; the question having been supposed to be directed at that part. 3. The *Nusa ki lako mai*, given as equivalent to come, is rightly explained by Mr. Ray's reference to

the Fiji *lako*; *mai* being so very commonly "hither." In the Banks' Islands *valago* is to run, the same work *lako* with *va* prefixed.

4. The word which strikes me as most remarkable is the *Nusa laman*, sea; that being the dominant word in the narrow district of the Banks' Islands and Northern New Hebrides, but extremely rare without that limit. Words like these seem to have much more significance in regard to the question of the connexion of these languages that words like *bue*, *mbung*, the universal Solomon Island *bua*, the name of the betel nut, introduced without much doubt with the practice of chewing the betel. Comparison of words, like that comparison of implements, weapons, &c., now made much more easy than before by Messrs. Heape and Partington's Album, tends, as it seems to me, to the rejection of the view that identical terms in various regions of Oceania have been carried on the surface by commerce, immigration, and castaways, and rather to the belief of an underlying community of speech.

The SECRETARY read a note on the presence of a Mongoloid element in Brittany, by Cte. A. Mahé de la Bourdonnais, upon which the PRESIDENT made some observations.

The PRESIDENT stated, on behalf of Mr. Francis Galton, that on account of the approaching occupation, by the Imperial Institute, of the land upon which his Anthropometric Laboratory is erected, he is compelled, to his regret, to close and to dismantle it.

FEBRUARY 24TH, 1891.

EDWARD B. TYLOR, Esq., D.C.L., F.R.S., *President, in the Chair.*

The Minutes of the last meeting were read and signed.

The following elections were announced:—

The Hon. Mrs. PEEK, of Wimbledon House, Wimbledon.

RANDALL H. PYE, Esq., of 7, Penywern Road, Earl's Court, S.W.

The following presents were announced, and thanks voted to the respective donors:—

FOR THE LIBRARY.

From Dr. BEDDOE.—*Ricerche preistoriche nelle caverne di S. Canziano presso Trieste. di Carlo Dr. Marchesetti. [Estratto dal Bollettino della Società Adriatica di scienze naturali in Trieste. Vol. xi, 1889.]*

- From Dr. BEDDOE.—*La Necropoli di S. Lucia presso Tolmino del Dr. Carlo Marchesetti*. 8vo. Trieste. 1886.
- From Dr. CARLO MARCHESETTI.—*Atti del Museo Civico di Storia Naturale di Trieste*. VIII.
- From CUTHBERT E. PEEK, Esq.—*Royal Geographical Society, Hints to Travellers*. 8°.
- From the AUTHOR.—*Die Grenzen der niederdeutschen Sprache*. Von Richard Andree. [From *Globus*. Bd. lix. Nr. 2 u. 3.]
- On certain mutilations practised by the natives of the Viti Islands. By Bolton S. Corney.
- Notes on counting and measuring among the Eskimo of Point Barrow. By John Murdock.
- The history of the Throwing Stick which drifted from Alaska to Greenland. By John Murdock.
- A study of Eskimo Bows in the U.S. National Museum. By John Murdock.
- From the UNITED STATES GEOLOGICAL SURVEY.—Bulletin Nos. 58, 59, 60, 61, 63, 64, 66; Annual Report, IX; Mineral Resources of the United States, 1888; Monographs, Vol. i.
- From the GOVERNMENT OF PERAK.—*The Perak Government Gazette*. Vol. iv. No. 1.
- From the INDIAN OFFICE.—*Epigraphia Indica and Record of the Archaeological Survey of India*. Part 6.
- From the EDITOR.—*Journal of Mental Science*. N.S. No. 120.
- *L'Anthropologie*. Tome ii. No. 1.
- *Nature*. Nos. 1111, 1112.
- *Revue Scientifique*. Tome xlvii. Nos. 7, 8.
- *Science*. Nos. 418, 419.
- From the SOCIETY OF ARTS.—*Journal*. Nos. 1995, 1896.

The Rev. C. HARRISON read a paper on *Religion and Family* among the Haidas.

RELIGION and FAMILY among the HAIDAS (Queen Charlotte Islands).

By REV. CHARLES HARRISON.

THE Queen Charlotte Islands, the extreme north-western lands of British Columbia, lie in the Pacific Ocean between fifty-one and fifty-five degrees of north latitude. They comprise over 200 islands, their length being 220 miles and their greatest width sixty-three miles. Graham, Moresby, Prevost, and North Islands are the largest, extending eighty, seventy, fifteen, and eight miles respectively, and constitute eighty per cent. of their entire area. Dixon's Entrance on the north, with an average width of thirty miles, separates Graham Island from the Prince

of Wales group in Alaska. Queen Charlotte Sound, from thirty to eighty miles across, lies between them and the mainland of the province. The nearest land is Stephen's Island, twenty-eight miles east of Rose Spit, the extreme north-eastern part of Graham Island. Cape St. James, their most southerly point, is 140 miles north-west of Cape Scott, the northernmost land of Vancouver Island. The Queen Charlotte Islands were first discovered by Juan Perez, a Spanish navigator, on the 18th of July, 1774, and named Cabo de St. Margarita. In 1787 Captain Dixon was exploring the west coast of Vancouver on behalf of a London fur company, when he discovered other islands ahead of him. He came here through an entrance on the west coast, which has been known as Dixon's Entrance ever since. He then hoisted the British flag and named the islands after George the Third's queen, and they have been known by that name ever since. The first white men known to have landed upon the islands were a portion of the crew of the *Iphigenia*, under the command of Captain Douglass. They remained nine days in Parry Passage in 1788, trading with the natives. The most extensive explorations made of any portion of the islands were those of Captain Etienne Marchand in the French ship *Solide*. In 1791 he examined the shores bordering on Parry Passage and part of the west coast of Graham Island commencing from Frederick Island southward. Since that time, although several parties of prospectors have visited various parts of the islands, no systematic effort has been made to thoroughly explore the entire group. During the past eight years I have resided at Massett, Graham Island, and am the only white man thoroughly conversant with the Haida language. The ancient traditions of the Haidas concerning their religion and creation I have received verbally from some of the oldest chiefs. I have divided my subject into two parts:—1st, the Haida Deities; 2nd, The Haida Creation.

PART I.—THE HAIDA DEITIES.

The ancient Haidas believed in two important gods—one as Hierarch of the celestial sphere, and the other as sovereign of the lower regions. These two gods formerly lived together in happiness attended by other inferior gods, until a dispute arose as to light and darkness. Shānunetlagidas was the name of one and Hetgwaulana was the name of the other god. Shānunetlagidas always wished for light in their abode of happiness and was never sleepy or tired. On the contrary Hetgwaulana was never happy unless it was dark. He said that it was impossible to sleep if it were always light. So one

day he was very angry and demanded that it should always be dark. Shānungetlagidas would not listen to this proposal and consequently a contest arose as to who should be the most powerful monarch in this land of gods. A battle accordingly took place, and the Chief of Light and his attendants prevailed and cast forth the Chief of Darkness and his followers into the lower regions. Thus it happens that where Shānungetlagidas is supreme it is always light, but, on the contrary, where Hetgwaulana is the chief it is always pitchy dark, and he is allowed to sleep undisturbed by the faintest ray of light. It is fully believed that Shānungetlagidas is the possessor of the sun and moon; he is also the creator of the stars and all the other luminaries that are supposed to exist in the kingdom of light. Hetgwaulana is credited with the origin of the clouds and darkness. As I have already stated, these two supreme deities had minor gods to assist them. All fevers are attributed to the god who resides in the sun. When he is offended by some action of theirs he visits the earth with the pestilence of smallpox and fevers. They try to propitiate him with offerings of berries cast into fire, and if they fail to regain his goodwill, they then take some portions of their daily food (chiefly smoked salmon or dry halibut) and throw it as far as they can into the salt water in order to gain the influence of the god of the sea, whom they believe to be more powerful than the god in the sun.

— Whenever the Haidas camped near the beach, before they commenced to erect their tent and cook their food, they would invariably take some dry halibut and berries and cast into the fire to propitiate the god of the earth, and so secure his influence to protect them from danger during the night. The god of the earth did not require this food for himself, but carried it to the friends of those encamped who had died during the previous year. In case they should happen to be greedy, and throw but a scanty portion of their food into the fire, their deceased friends would become very angry, and within the next twelve months they all would most assuredly die.

The god of the clouds is another deity who inspires a feeling of awe and dread in the bosom of the bravest warrior. On a dull day, when the clouds are hanging low down, they firmly believe that this god is in search of a meal, and anyone caught out on such a day is bound to die before the expiration of six months, so as to furnish a dainty dish for this anthropophagous god. As the people are afraid of his cruel threat to catch all who come out on such a day, they almost always remain indoors. This god has a novel way of securing his prize. He comes down on the clouds and sits watching for any stray Indian. As soon as one comes near him he does not pounce upon his

body. No! this would be too vulgar an action for a god to do. He merely seizes the spirit of the Indian, *i.e.*, he draws the spirit out of the body and takes it with him on high; and in a very short space of time the body has to go in search of his spirit, and so becomes an easy victim of this cannibal god.

The Haidas did not fear the two great spirits as much as they feared the minor deities. They believed that Shānungetlagidas and Hetgwaulana were too great and independent to care very much for them while on earth, but were busy preparing habitations for them to live in after death. The two great gods were worshipped but not feared, and no one is able to give a definite answer as to what they believed they were or how they came into existence. They existed according to tradition, and that was sufficient for the Haidas. They also created all the inferior gods to assist them in their united kingdom above the clouds. If, however, they were in great trouble, they would evoke the aid of the Spirit of Light, and if they wished to bring an eternal curse on their enemies, they would pray and offer sacrifices of fish to the Spirit of Darkness. Shānungetlagidas is supposed to have commanded the inferior gods to protect the Haida nation and to supply them with all the necessities of life. Their supplications were addressed to this supreme chief through the god of the sun and the god of the sea. Their offerings were always made to the minor deities in order to secure their goodwill and assistance as mediators with the Great Chief whenever they were seriously ill and on the point of death. Ordinarily most of their religious rites and ceremonies have reference only to the sun god and the sea god.

Whenever a good Haida is about to die he sees a canoe manned by some of his bygone friends who come with the tide to bid him welcome to their domain. They are supposed to be sent by the god of death. The dying man sees them and is rejoiced to know that after a period passed within the city of death, he will, with his friends, be welcomed to the kingdom of Shānungetlagidas. His friends call him and bid him come. They say, "Come with us; come into the land of light; come into the land of great things; wonderful things; come into the land of plenty, where hunger is unknown; come with us and rest for evermore. The birds of our country will bring you delicious berries; the dogs of our city will furnish you with innumerable bearskins, and your home will be made of beautiful cedar all inset with most lovely abalone shells. Come with us into our land of sunshine and be a great chief attended with numerous slaves. Come with us and the hairseal will provide you with salmon, halibut, and all kinds of shellfish. Come with us now," the spirits say, "for the tide is about to ebb and we must

depart." At last the soul of the deceased man leaves his body to join the company of his former friends, and his body is buried with great pomp and splendour.

In regard to the wicked Indians, great clouds appear in which are the satellites of the cloud monarch who are ready to pounce upon their souls as soon as the body dies. They have no beautiful houses to dwell in, and no good food is supplied them. They are compelled to live with this dreaded chief twelve months, and after their bodies are buried, their souls are commanded to descend to the earth and bring their bodies to supply their chief with food. Should they refuse to accede to his request, he then begins to feast on their spirits, the consequence of which is, that their souls will immediately die. When the twelve months expire, he conveys their souls, if obedient, down through the sea, and the land beneath the sea, into the kingdom of Hetgwaulana.

The good land is heaven, and is called "shā tligē," the land above. The Good Chief is the reigning monarch in the land above, and the souls of the good Indians are taken there by his emissaries and presented with everything that could be wished for, after they have successfully passed through the domain of Chief Death. In heaven everybody is happy. There, in the land of the Great Chief, is perpetual light, with no clouds, no storms, and no fierce winds to mar the peace of his friends. There, they are clothed in beautiful garments made of cedar and spruce root and hunt and fish the livelong day. There, they dance their best dances and sing their favourite songs in the presence of their chief continually.

Hetgwaugē is the name of the lower region over which Hetgwaulana is the chief. To this place Chief Cloud conducts the souls of the wicked Indians, and there they are prevented from hunting and fishing, and all enjoyment is at an end. It is a most dismal region to live in, as it is always dark, with terrible storms, and cold winds blowing continually. The storms prevent them from catching fish, and the snow prevents them from hunting, and thus they are in a state of perpetual misery and trouble.

The question naturally arises, what makes a good Indian, and what constitutes a bad one? The good Indians are those who worship the Great Chief through the minor deities; are punctual in offering sacrifices to the inferior gods; and are obedient to the commands of the great medicine man known as Saagga. They must also love their friends, and be kindly disposed towards the poor. They must never fight with their friends, but must always attend the great dance festivals and give liberally towards the feasts. They must only go to war against a foreign tribe at the command of the Saagga, who will then assure them of

victory. If anyone be killed by an accident or in actual warfare the services of the Saagga will gain him an admittance into heaven. For which service the Saagga was accustomed to receive a bale of blankets valued at \$60. Finally, all who are happy while on this earth will be admitted by the Great Chief into his eternal kingdom, where they will continue to be happy without end.

The wicked Indians are those who are always quarrelling and fighting. They have no desire to love their friends, and their only wish is to steal the property of the good Indians. The greatest sin a Haida can commit is to disregard the commands of the medicine man. All bad Indians hate the Saagga, despise his authority, and are consequently sent by him to the lower region. In general it is safe to say, that all who are unkind one to another, all who are quarrelsome, all who steal and commit murder, and all who disobey the medicine man, will be handed over by Chief Cloud to Chief Hetgwaulana after he has feasted on their bodies.

The Haidas believe that the soul leaves the body immediately after death, and is taken possession of either by Chief Cloud or Chief Death. The good soul is taken possession of by Chief Death, and during its sojourn in the Domain of Death it is taught many wonderful things, and becomes initiated into the mysteries of heaven. At last he becomes the essence of the purest light and is able to revisit his friends on earth. At the close of the twelve months' probation the time of his redemption from Death's kingdom arrives. As it is impossible that the pure essence of light, which is Shanungetlagidas, should come into contact with a depraved material body, the good Indian assumes only its appearance, and then the gates of cedar, beautifully carved and ornamented with shells, are thrown open, and his soul which by this time assumes the shape of his earthly body, but clothed in the light of the Kingdom of Light, is delivered to the Chief of Light by Chief Death in whose domains he has been taught the customs to be observed in heaven.

The bad Indian in the region of the clouds is tortured continually. In the first place his soul has to witness the chief of that region feasting on his dead body until it is entirely consumed. Secondly, he is so near to this world that he evinces a longing desire to return to his friends and gain their sympathy. Thirdly, he has the dread of being conducted to Hetgwaulana ever before his mind. No idea of atonement for his past wicked life is ever permitted, since his soul after death is incapable of reformation and consequently incapable of salvation. Sometimes permission is granted to souls in the clouds to revisit the earth. Then they can only be seen by the Saagga, who describes them as

destitute of all clothing. They are looked upon as wicked and treacherous spirits, and the medicine man's duty is to prevent them entering any of the houses; and not only so, but as soon as the Saagga makes the announcement that a certain soul has descended from the clouds, no one will leave their homes, because the sight of a wicked soul would cause sickness and trouble, and his touch, death.

Now it sometimes happens that the souls in the Domain of Death are not made pure and holy within twelve months, and yet when their bodies died they were not wicked enough to be captured by Chief Cloud. Then it becomes necessary that the less sanctified souls return to earth and become regenerated. Every soul not worthy of entering heaven is sent back to his friends and reborn at the first opportunity. The Saagga enters the house to see the newly born baby, and his attendant spirits announce to him that in that child is the soul of one of their departed friends who died during the preceding year. Their new life has to be such as will subject them to retribution for the misdeeds of their past life, and thus the purgation of souls has to be carried on in successive migrations until they are suitable to enter the region of eternal light.

Likewise it sometimes happens that some souls are too depraved and wicked after twelve months' sojourn in the clouds to be conducted to Hetgwaulana, that they also are sent back to this earth, but are not allowed to re-enter mankind. They are allowed to enter the bodies of animals and fish, and compelled to undergo great torture. These evil souls are commanded to hurt all strangers, but have not to molest persons of their own tribes. The black bear is the most powerful creature that such a soul could inhabit, and the mouse is the smallest one. The animals and fish inhabited by evil spirits are also continually afraid of being killed, and it appears to me that this state of suspense is the means by which they could re-enter the clouds, and be finally conducted into the presence of Hetgwaulana. Thus it is that the ancient Haidas always used to wear an amulet of a bear's tooth around their necks to protect them from the wicked soul of the bear. Storms and bad weather, when they cause the people trouble and a scarcity of food, were attributed to an abundance of wicked souls in the vicinity.

Sometimes the soul enters into the body of a fin-back whale, and consequently fin-back whales are much honoured and at the same time feared. On no account could an Indian a few years ago be persuaded to shoot one. Sometimes a solitary whale enters the inlet and appears opposite to an Indian house. Then the inhabitants are in a great dread of capsizing at sea, and if

such should be the case they will most assuredly be seized for Chief Cloud.

Take the mouse for another example of the strange and demoniacal notions that exist amongst the elder portion of the community even at the present time. This harmless little creature is magnified into such proportions at times that it can contain the wicked soul of an adult, and yet become so small that it can enter into the stomach of the living. The ancient Haidas firmly believed that in every one's stomach existed a number of mice, and each mouse represented the wicked and restless soul of a departed relative. Therefore a bad-tempered man was the possessor of a mouse that was possessed by a soul that was too ill-tempered to be introduced to Hetgwaulana. A man who was always quarrelling and fighting was supposed to have within him a soul who in his former life was addicted to such vices. The great question to consider is, how do the mice get into the stomach? Chief Edenshaw, the superior chief of the Haida nation, now 90 years of age, calmly and quietly told me that one bright summer's morning, having got up very early, he went for a stroll over Rose Spit and came upon some women who were sound asleep. To his horror and great astonishment he saw that their faces were covered with mice. He sat down quietly and watched them. Presently he saw one disappear down a woman's throat, then another, and quickly no less than seven vanished down her throat. Out of the seven that had disappeared only one returned as he had evidently gone down the throat of one of his tribe instead of the throat of an enemy. This left six woebegone souls inside of this most unfortunate woman. I did not ask him what became eventually of the woman herself, but doubtless, from the number of malevolent spirits located within her, she must have finally become a dainty dish for the Cloud Chief.

PART II.—CREATION OF THE HAIDAS.

Now the question arises, how were the Haidas created, and by whom? Thousands of years after Hetgwaulana was cast forth from the region of the clouds he commanded one of his followers to assume the shape of a bird and make an attempt to discover what the gods in the Kingdom of Light were occupied with, and also obtain information if possible how they in the region of darkness could again obtain admission into their long lost country.

This god assumed the form of a Raven, and after his first attempt to obtain information about Shānungetlagidas had been frustrated he determined never to return again to the dismal

abode of his associates but remain an inhabitant of the air and be at liberty to do what he pleased. Thus in the earliest ages the Raven was supposed to live in the grey clouds which overshadow the mighty deep, and had no place of refuge and no place on which he could rest. At this period there was no dry land and the face of the earth was covered with water. At last the Raven grew very angry, being very weary, and beat the water with his wings until it flew up in great clouds on each side of him, and in its fall became transformed into tiny rocks, and so at last he found a resting place.

These rocks grew larger and larger and extended themselves on every side until at last they reached from North Island to Cape Saint James. Some years afterwards the rocks underwent another change and became transformed into sand, upon which a few trees eventually grew, and this became Queen Charlotte Islands and the country of the Haidas.

The Raven then wished some one to assist him in cultivating his newly-made world. He therefore collected together two large mounds of clam-shells on the beach near Sisk and made them human, and afterwards compelled those now made to become his slaves. At last the two slaves became dissatisfied with their condition and told the Raven that they were not properly made. In anger the Raven listened to their piteous story, and then concluded to make them male and female. He threw limpets at one which eventually became the man, and the other remained as she was before, a woman. Thus were created the first parents of the Haida nation. Some time ago a little Haida boy was asked who had made him. Without stopping to consider, he promptly answered Yetlth the Raven. This goes to prove that until quite recently the Haidas fully believed the Raven to be their creator.

The creator lived at the north-eastern point of Graham Island at a place called Rose Spit. This place is twenty-six miles distant from Massett. He presently grew weary with his lonely life and at last commanded the female slave to be his wife. They lived peaceably and happily together for a number of years, but at last he became angry with her, and sent her and the man slave away to a place now called Skidegate, because she bore him no children.

Being left quite alone, he came to the determination to again gain admittance into the Kingdom of Light, not to please, however, the Chief of Darkness, but to gain his own ends and secure a beautiful wife from among the daughters of the heavenly chiefs. One bright summer morning he started off on his long and weary journey. He soared upwards and onward over the lonely sea, until the land he had created appeared to

him to be a small mosquito. Upwards he soared into the clear blue sky until at last he came to the walls of heaven. He concealed himself until the evening, and then assumed the form of a bear. He then scratched a hole through the wall and entered his former abode.

The place had greatly changed since the time he was an inhabitant there, and consequently he took time to consider everything that he saw so as to form a similar kingdom on his return to earth. There he found that everyone was considered a god or a chief, and all were submissive to the Chief of Light, who still held supreme power as in olden times. He also found that the Great Chief had divided his kingdom into towns and cities, into lands and seas, and had created the moon and the stars, and made a great luminary to rule over all, which was called Juiē, the sun. At last he was caught by the hunters of the king and brought into his presence. As the Raven appeared to be a beautiful and tame bear, he was kept as a playmate for the king's youngest son. He then spent three years in intimate connection with the royal family, and had sufficient time to make careful and necessary observations prior to his descent to the lower world. He determined to found a dynasty as powerful as the one over which Shānungetlagidas held control, and that his people also should be as numerous as the inhabitants of heaven.

It was customary for the children in the Land of Light to disguise and transform themselves into bears, seals, and birds. Now it so happened that the Raven who had become a bear was strolling on the beach one evening, looking for his supper of clams, when he espied three other bears approaching him. He knew at once that they were children of a great chief, and instantly he transformed himself into a large eagle, stole the sun, which happened to be setting at the time, also the fire stick that was used to kindle the heavenly fires, and flew over the walls of heaven with one under each wing, together with the child of a great chief in his beak.

As soon as the people found that the sun had been stolen, they reported the matter at once to the king. He then ordered his kingdom to be searched, and if the culprit were found he was condemned to be thrown down to the kingdom of Hetgwaulana. Whilst they were busy searching for the thief, a messenger arrived, who stated that he had seen a large eagle flying over the walls of their city with the sun under his wing. At once, all the heavenly citizens gave chase, and the Raven was pursued. In his flight for safety, he dropped the child and it fell down through the clouds, and down into the sea close to the Raven's kingdom. The Raven also descended, bearing

with him the sun and the fire stick in safety to the earth. When the child fell into the sea, he cried aloud for assistance, and immediately the little fishes came in great shoals to his aid and carried him on their backs safely to the shore. This fish is very numerous around Rose Spit at the present day, and their forms have remained dinted in the blue clay of that district from the day when they bore the heaven-born child ashore until now. The Great Chief was a lover of peace, and consequently did not allow his followers to pursue the Raven down to the earth, as Chief Hetgwaulana might then be tempted to regain heaven and give them perpetual trouble. So the Raven was unmolested, and another sun was created in heaven by the Great Ruler who loved light and hated darkness.

Now the Raven thought that he had secured a chief's daughter, but it turned out to be a great chief's son. The Raven loved him exceedingly, and built a house at Rose Spit especially for the accommodation of the child and the sun. The child grew to be very powerful and had command over all animals, fish, and birds. Whenever he called to the fish they would at once appear and bear him out to sea. Whenever he wished to fly through the air he would call to the birds. They would at once come and bear him wherever he wished to go on their wings. The bears and other animals attended to his daily wants and supplied him with salmon and berries. The animals, birds, and fish were created by the Raven for the sole benefit of this heaven-born child. The Raven also kept the sun and the fire stick in a very strong and secure room, as he was afraid that his two former slaves would return and steal them.

Presently the slave wife of the Raven returned and begged to be readmitted into the Raven's society. The request was granted, and she became once more the mistress of the Raven's household. She took a great interest in the child and attended to his every wish. By this time the child had grown to be a handsome young man and began to love this woman. She reciprocated his love and at last resolved to become his wife. The Raven soon found that they were acting as man and wife, and he became very angry. He threatened to kill the woman. This threat caused the lovers to escape from the house and hide themselves in the bush. When they escaped from the Raven's house, they carried with them a large cedar box, in which the sun and the fire stick were placed. Day after day, and month after month, they wandered southward without proper nourishment and in great fear of the Raven. They also carried with them the box containing the sun and the fire stick.

One evening, faint and weary, they sat down near a little

creek, and the woman, being very hungry, wept bitterly. Her husband walked a little distance up the stream, and at last found a dead land otter, but could not eat it as they had no fire to cook it. Next morning, they remembered that they had the fire stick in the box that they were carrying. They determined to try it. The young man got it and instantly made fire, and the two cooked the body of the otter, ate it, and proceeded on their journey. When they reached Cape Ball, they were hungry again, but the young man began to sing some of the songs taught him in heaven, and the sea receded four miles from the shore and left one great whale stranded on the beach. The young man got rocks and stones, and carried them on his back to where the whale was, and barred it in, and thus described a circle around it that can be seen at the present day.

The young man and his wife lived on whale flesh until they reached the channel that divides Graham and Moresby Islands, and there they built a house, which afterwards became the nucleus of the Skidegate village. There they lived for several years in peace and prosperity, and a daughter was born which made them exceedingly happy. In time their daughter grew to be a beautiful woman and most lovely to behold, but the great drawback to her peace of mind was that no husband could be found for her.

Year after year passed by, and when her parents had given up the idea of providing her with a husband, there came from North Island, around the west coast, the Raven's male slave that he had made on the beach at Sisk, and this forlorn specimen of early man desired the hand of this lovely damsel in marriage. Her father refused to give his consent, and was very angry at the impudence of a clam-shell-made man in daring even to think of becoming united to the daughter of a heaven-born chief. The slave was not so easily to be got rid of, so he lived in the woods near the house, and whenever the husband was away from home would come and talk with his wife, who was the same woman that was made by the Raven at the time of his creation. This woman treated him as her brother, and told him all her secrets, and even went so far as to reveal to him the place where her husband kept the chest containing the sun that he had stolen from the Raven's house at Rose Spit.

This treasure was safely stored in a strongly built house in the woods where the heaven-born man would frequently go to pray to the gods in the Kingdom of Light. It was bad policy for the woman to divulge the whereabouts of her husband's great treasure, for the heaven-born chief, on the slave appealing for the last time for his daughter's hand, kicked him most

unceremoniously from the house. In revenge, the chief having retired for the night, the slave went to the house in the woods, descended through the smoke hole, and found the box, which contained the sun. He seized a large club that was on the floor and destroyed the box, taking great care of the sun which he had first abstracted. He then sat down and pondered over his lonely lot in life, and became at last so mad that in anger he kicked the sun until it was broken into fragments, and each piece flew up through the smoke hole into the sky. The largest piece became the sun, a smaller one the moon, and all the chips became stars scattered upon the face of the heavens. Thus were created the sun, moon, and stars of the Haida country.

It is curious to note that the heaven-born chief was allowed to marry an earth-born slave, but the earth-born slave was not allowed to have the daughter of the heaven-born chief for his wife. This is adhered to at the present day. A chief is allowed to marry a female slave, whilst the male slave is not allowed to marry a free-born woman, thus following the supposed laws of their creator—the Raven.

The slave at once realised the terrible position in which he was situated; for, had the chief found him he would most undoubtedly have been killed. So before the dawn of the following morning he was well on his way on the west coast to his former abode at the North Island. He travelled by night and slept in the woods during the day, thus avoiding the keen eye of the Raven and the meeting of the Chief. At last he reached home and sat brooding over his misfortunes, until the happy thought entered his mind of doing what the Raven had done, and to seek his wife from amongst the daughters of heaven.

At this period of the world's civilization they possessed bows and arrows made after the manner of those seen by the Raven when in the Kingdom of Light. They also had the sun to give them heat during the day, and the moon and stars to give light by night. So on one bright moonlight night he shot an arrow into the moon so that it remained there. A second arrow he shot into the notch of the first, a third into the notch of the second, and continued to do so until the arrows reached from the moon to the earth. He was very energetic in his work, for he shot no less than three hundred and sixty-five arrows, which took him three hundred and sixty-five nights to accomplish, and which ultimately got transformed into so many days and nights that finally they became the days of the Haida year.

Up this ladder of arrows he climbed and passed through the moon into heaven. Early in the morning of the first day that he arrived there he saw a beautiful woman swimming in a lake of

crystal. He stealthily went round to the side on which she was likely to step ashore, and awaited her arrival. She soon came: but no sooner did she set her foot on the beach than she was seized by the slave with whom he dropped into the sea not far from North Island.

The Raven happened to be flying near North Island during the descent of the slave, and noticing something extraordinary in the atmosphere he watched, and at last discovered what he thought to be two large eagles were the slave and the beautiful woman. No sooner did the slave lead her into his house than the Raven appeared. The Raven demanded that the slave should give him this beautiful woman, but he refused to do so. Whereupon the Raven became very angry, took possession of the woman as his wife, and most unceremoniously changed the slave into a spirit, and drove him away from him for ever. He cursed the slave most bitterly and commanded that he should always be a wandering spirit to look after the growth of every living thing.

Thus the wanderer, as the slave is now termed, is always busily engaged causing the berries and roots to grow for the support of the Haidas. Every plant, every flower, and every tree are under his control; and he it is that provides fine cedar trees on the islands, out of which the natives dig their canoes. The beasts of the forest, the fish in the sea, and the birds of the air are under his supreme control. At the present time he is fulfilling his destiny, and at times the Haidas think with gratitude of his goodwill toward them, and offer him sacrifices of berries, roots, salmon and bear-grease. These they put into hollow trees to provide a meal for their most unfortunate ancestor, should he require anything to eat. Thus he wanders upon the face of the earth both night and day, and must continue to roam apart from his descendants, until the end of all things. At the end of time, when the Raven shall become dissatisfied with the existing state of affairs he will recall him, and woe to the Haidas when he is recalled! for the trees and plants, the fish and animals, the fowls of the air, and even their country will most undoubtedly cease to be, and then shall the end of the Haidas come.

Mr. HARRISON has since contributed the following notes in reply to various questions raised during the discussion:—

Firstly. Many of the visitors to Queen Charlotte Islands are of the opinion that the ancestors of the Haida nation were blown out to sea from some of the harbours of Japan, and having lost all bearings were eventually driven across to the islands.

Quite recently Japanese junks have been found on the west coast dashed to pieces against the rocks. If their junks have been washed across to our shores there is no reason why junks manned by Japanese may not at an earlier date than the white man's knowledge of the Haidas have been successfully sailed or blown across by stormy winds. This has a tendency to confirm the opinion of those who believe that the Haidas originally came from Japan. At any rate they are a distinct race of people. Their language, also, is quite distinct, and has no resemblance whatever to the languages spoken by the neighbouring tribes on the mainland.

Secondly. Juan Perez was the first white man to discover the islands in 1774, and they were named by him Cabo de Saint Margarita. It is now one hundred and sixteen years since the Haidas first came into contact with our race. And for the greater part of this time they have been associated, not with the good, but with the evil.

Thirdly. The Haida months are :—

Kētas: September.—This month they get the cedar bark.

Kalk Kungas: October.—Ice moon.

Chā Kungas: November.—The bears paw the ground for roots.

Gwougiangas: December.—Too cold to sit on the beach this month.

Lthkittūn Kungas: January.—Goose moon.

Tān Kungas: February.—The bears begin to come out of their holes.

Yhūtgaas: March.—Laughing goose moon.

Whūtgaas: April.—Foreign goose moon.

Tāhellē Kungas: May.—The month of flowers.

Hānskilē Kungas: June.—The berries begin to ripen this month.

Hānalung Kungas: July.—Moon in which the berries are ripe.

Chīn Kungas: August.—Salmon moon.

Kishalsh Kungas.—Moon in which they smoke their salmon.

They always smoke their salmon between July and October.

There are twenty-eight days in each Haida month, and thirteen times twenty-eight make three hundred and sixty-four. The difference of one day between the Haida year and ours they

explain by saying that one day was spent by the Raven's slave in climbing the ladder of arrows to secure a heaven-born woman for his wife. This day must be reckoned at the end of the thirteenth month, and will then make their year to correspond with ours.

Fourthly. The medicine men were supposed to be in communication with Chief Cloud, and they alone were able to commune at any moment with the spirits of the departed, during their year's residence in the clouds, or in the domain of Chief Death. All wicked Indians were those who refused to obey their commands, and their spirits were taken possession of by Chief Cloud. The Haidas formerly placed the dead bodies on the highest branches of the spruce trees. If the medicine men were not well paid by the deceased man's relations they would go by night, take down his body from the tree, bury it in the ground, and then declare that Chief Cloud had sent the man's spirit to bring his body into the clouds to furnish him, *i.e.*, the Chief, with a meal.

Fifthly. The medicine man is the supposed possessor of all knowledge, not of the present world alone, but also of the world to come. He is able to turn himself into any animal at any time, and all diseases are subject to his incantations. At any moment he can commune with the spirits of the departed, and to him the enemies of the tribe must yield. Thus from the cradle to the grave the destinies of the tribe are subject to his whim, and consequently he ranks as a very great chief.

DISCUSSION.

Mr. BOUVERIE-PUSEY asked whether, according to the myths of the Haidas, any children were born to the women of heavenly origin spoken of in the paper, and whether any of their blood was supposed to remain in the existing human race.

Dr. TYLOR, Mr. GALTON, and Mr. LEWIS joined in the discussion, and the Author replied.

Miss BUCKLAND also contributed a Note on the subject of the Paper, which was read by the President.

NOTE by MISS A. W. BUCKLAND.

In my paper on "Traces of Pre-Historic Intercourse between East and West," published in the "Journal" for February, 1885, I called especial attention to some remarks by Mr. Wm. Dall in his extremely interesting and instructive article upon "Masks, Labrets, and certain Aboriginal Customs," published in the Third Annual Report of the Bureau of Ethnology, Smithsonian Institution. The point to which I particularly referred was the existence, as pointed

out by Mr. Dall, of a certain group of figures, so distinctive as to render it almost impossible that they could have had an independent origin in every place in which they are found. These figures represent a man holding a frog, a lizard, or a snake; but generally one of the two first named, with both hands, the tongue of the reptile being attached to that of the man, as though the latter were receiving inspiration or some special endowment from his totem. Mr. Dall has traced these peculiar figures among the ancient sculptures in Central America and Mexico, among the Haidahs and Tlinkits of to-day, and among the extraordinary painted objects, fetishes, or dancing sticks of New Ireland, which appear to have their nearest affinities in the Shaman sticks of the Haidahs. These figures, which Mr. Dall supposes to be of Melanesian origin, appear very plainly in the elaborate wood carvings of New Zealand, as also in the Solomon Islands, and I have lately come across a Tartar story published in the "Archæological Review," May, 1888, which seems to extend the myth from which doubtless the figures originated, to the continent of Asia; and to connect it with a number of legends common all over the world, having reference to the acquisition of the language of animals. The story alluded to is thus given: "An old beggar who takes no thought for the morrow, throws daily into the sea the remains of his food, and upon the bread thus cast on the waters the fish grow fat. The thing comes to the ears of the lord of the fishes, who sends for the free-handed beggar to reward him. As the fish are conducting him through the sea to their lord, they say to him, 'The king of fishes will offer you gold and silver; do not take them, but say, "Let me kiss your tongue."' The fish king did as the fish had foretold. The beggar refuses the proffered wealth, and asks only to kiss the king's tongue. The king, after expostulating, allows the beggar to do so, but warns him that by this means he will receive a knowledge of the language of all creatures, which he must reveal to no one under pain of death. By overhearing the talk of two birds the beggar discovers a treasure which makes him a rich man."¹

There are a great number of stories given by Mr. Frazer in the article from which I have quoted, in which the language of animals is acquired chiefly by the eating of white snakes when *cooked*, and these snakes are usually in some way connected with the hazel tree; but sometimes the gift of understanding the language of animals is attained, as in the story given above, or by receiving something, such as a plant or the serpent-stone from the mouth of the white serpent; but in all cases it is necessary that the flesh, or the broth in which it is cooked, should touch the tongue, being in most of these tales conveyed accidentally to the mouth by the finger; and, it has been suggested that this is in some way connected with the figure of Harpocrates, which seems not altogether improbable from the constant recurrence of the obligation of silence with regard to the acquired gift, on pain of death.

¹ "The Language of Animals," J. G. Frazer, "Archæological Review," May, 1888.

The embodiment of these legends in the curious carvings before referred to, in such widely separated countries as New Ireland, New Zealand, among the Haidahs and Tlinkits, as well as in ancient Mexico and Central America, is certainly a very singular fact. In the American specimens there is always some connection with the rites and dances of the Shamans or medicine men.

Among the Haidahs and Tlinkits, Mr. Dall says these carvings belong particularly to the Shaman, and are characteristic of his profession; but they are not confined to the rattles, but appear on totem-posts, fronts of houses, and other objects associated with the medicine man. It would be interesting to know whether this applies also to the New Zealand and New Ireland specimens. Medical knowledge has an evident connection with the Asiatic and European legends, in which men become great doctors by attaining the language of all things living in the manner described, for the beasts and herbs are represented as proclaiming their several medicinal virtues to the initiated.

According to the American myth, "the young man who aspires to become a medicine man, goes out into the woods, after fasting for a considerable time, in order that his, to be, familiar spirit may seek him, and that he may become possessed of the power to communicate with supernatural beings; if successful, he meets with a river otter, which is a supernatural animal. The otter approaches him and he seizes it, kills it with a blow of his club, and takes out the tongue, after which he is able to understand the language of all inanimate objects, of birds, animals, and other living creatures. He preserves the otter's tongue with the utmost care in a little bag hung around his neck. The skin he also preserves, and it forms an important part of his paraphernalia."

"This ceremony, or occurrence," continues Mr. Dall, "happens to every real medicine man. Consequently, the otter presenting his tongue is the most universal type of the profession as such." And he adds, "The remarkable form of carving, namely, that representing a figure with the tongue out, and communicating with a frog, otter, bird, snake, or fish, is one of the most characteristic features of the carvings of the people who live between Oregon and Prince William Sound."¹

In conclusion, I would wish to point out that almost all the animals connected with this curious myth and the carvings in which it is embodied are water animals, or amphibians, and even when birds are represented they are such as draw their sustenance from the water.

A. W. BUCKLAND.

Mr. GALTON read a paper on the Anthropometric Laboratory at South Kensington.

¹ "Masks and Labrets," W. H. Dall, Smithsonian Institution Bureau of Ethnology Annual Report, 1881-82.

RETROSPECT OF WORK DONE AT MY ANTHROPOMETRIC
LABORATORY AT SOUTH KENSINGTON.

By FRANCIS GALTON, F.R.S.

It was mentioned at the last meeting of this Institute that my Anthropometric Laboratory had been closed, owing to the previously unoccupied ground on which it was permitted to stand having become the property of the Imperial Institute, and being placed in the hands of their builders. Since then, however, the authorities of the South Kensington Museum have placed a larger and better lighted space under their own roof at my disposal. It is now in an unfinished state, but I hope to re-establish the laboratory before long, and in the meantime I will take this opportunity of saying a few words in retrospect.

My principal object in establishing the laboratory was to familiarise the public with the methods of anthropometry, and at the same time to register facts that might hereafter be of use in individual life histories. As regards this it was successful. The number of different persons each measured in many and various ways during the three years of its existence is 3,678, but the same person has often been measured repeatedly. So the total number of sets of measurements all made by the same person, its Superintendent, Sergeant Randall, is considerably greater than the above figure. Persons of all ranks went to it, a knowledge of its existence was extending, and it was becoming increasingly frequented up to the day of its closure. Many correspondents in the United Kingdom, in America, and elsewhere, have more or less adopted its methods, and it was, I may add, a great consolation to me to receive on the very day that I began to dismantle it, the proof sheets of the register, and other forms in many respects like my own, that are to be used in the laboratory at Dublin, which has been set on foot through the efforts, and will be carried on under the superintendence, of Professors Cunningham and Haddon.

The data collected at my laboratory have been of service in many ways, of which I will mention a few. They enabled me to work out in some detail (the results are not yet published) the subject of correlation between various bodily attributes, as between the length of different limbs, between stature and strength, weight and lung capacity, and very many other related measures. This was done on an entirely new principle, described in a memoir read before the Royal Society two years ago ("Proceedings, Royal Society," vol. xlv, p. 135), and alluded to here in my Presidential Address in 1889. It is too

technical a subject to enter into now; I need only say that it deals with entire systems of possibilities, and not with mere averages which, as I have shown, lead to erroneous results, and that it reduces all forms of correlation, including hereditary qualities, to one simple law, namely, that of the relation between two variables partly dependent on a common set of influences.

The exact value of anthropometric measurement as a clue to personal identification on the system of M. Alphonse Bertillon, admits of being tested in some essential respects by the measures already obtained at the laboratory. I have done so to some degree, but postponed a more minute inquiry until more experience should have been gained. What has been, or can be done with the materials in hand is this. First, as to the sufficient variety among adults to afford a satisfactory basis for classification, having due regard to the limitations introduced by correlation. Secondly, as to the changes during youth and early manhood in the size and proportions of the body, and especially of the head. Thirdly, in respect to the precision of measurement as affected by temporary changes in the size of the parts measured, and by fallibility on the part of the measurer. I should speak technically if I entered further into detail, and can therefore only add that the inquiry is full of interest in a purely scientific sense, quite apart from its important practical bearings.

As an allied inquiry to this, I was able to utilise the laboratory for an investigation into the curious patterns seen in finger marks, which are caused by the embranchments of papillary ridges. I have recently read a memoir on this subject before the Royal Society, which is on the point of being published in their "Philosophical Transactions." It turns out that these minute ridges are unexpectedly instructive and important. The patterns are seen to fall of a necessity into a small and definite number of distinct classes; it also appears that these classes resemble the genera or species of plants and animals, in that the individual forms of each genus which depart but little from the ideal average of all of the individuals of that genus, are far more numerous than those which depart from it more widely. It follows that although very wide departures from the average may be possible, yet that even much less wide departures are so rare as to be practically non-existent. It is argued that we have here an instance in which natural selection, whether sexual or other, has had no influence in moulding the patterns, and yet that a result which is exactly similar to that which can be produced by their influence has been attained through the agency of internal causes alone. The important conclusion

is inductively drawn from this, that natural selection cannot justly claim a monopoly of influence in the manufacture of species, but that internal causes are by themselves able to create them. I have shown elsewhere ("Natural Inheritance," pp. 119-123), the way in which these two distinct influences may co-operate. Proceeding further with the same subject, I procured and have been able to minutely compare the impressions made in ink by the same finger at the beginning and end of periods of many years, as from childhood to youth, from boyhood to early manhood, from early to late manhood, and from manhood to incipient old age. I find from twenty to forty definite points of comparison in each couplet of finger marks. In eight such couplets that are photo-lithographically reproduced on an enlarged scale in the memoir just alluded to, there is a total of 296 points of comparison, and not one of them failed to appear in both impressions. Hence it appears that peculiarities in the lineation, made by the papillary ridges of the palms of the hand, and as I infer in the sole of the foot also, are by far the most permanent of all external human peculiarities and the surest known means of personal identification.

Some tables of growth and development have been calculated from the data collected at the laboratory, and an attempt has been made to compare the physique of persons and of different professions, &c., so far as the paucity of the numbers admitted.

The experience of the laboratory has also been of considerable service in estimating how far it was practicable and advisable to introduce physical tests into competitive examinations.

Latterly I have been collecting data bearing on the symmetry of the two sides of the body, but too little has been done to deserve more particular mention.

In brief, what little has been accomplished at the laboratory during the three years of its existence justifies to my own mind the trouble and expense I have been put to in building, equipping and maintaining it. But it never reached to my ideal. Besides the objects already named, I was almost equally desirous of establishing a place where the keenness of the senses and other faculties in any individual who applied, might be measured with all the accuracy and painstaking that is achieved by the few biologists who occupy themselves seriously in such pursuits. To effect this, it would be necessary to secure the occasional services of a skilled experimenter and to ensure at the same time that a sufficiency of persons should come to be measured. The time did not seem to have arrived for such an enlargement of the existing methods, though I hoped and still hope that it may not be far distant, as the utility of the laboratory becomes more widely appreciated. The measurements that have thus far been

employed are of a comparatively rude but not ineffective character.

It would give me pleasure at any time to receive suggestions as to new and useful special inquiries, such as might be carried on and brought to conclusion without a too serious expenditure of time and effort.

Professor CUNNINGHAM gave an account of the Anthropometric Laboratory in Dublin, founded by himself and Professor HADDON.

The ANTHROPOMETRIC LABORATORY of IRELAND.

By Professor D. J. CUNNINGHAM, M.D., and Professor A. C. HADDON, M.A., F.Z.S.

WE had not intended making any formal communication to the Anthropological Institute upon the anthropometric work which we propose to carry out in Dublin until this work had been actually commenced and we had some results to show. But Mr. Galton, who has given us at every stage of our preparations the greatest encouragement and the fullest assistance, thought that it might be of advantage to our new laboratory and not without interest to the members of this Institute, if we were to give a brief account of the steps we have already taken to introduce anthropometric work into Ireland, and also to state the chief objects which we have in view in so doing.

We need hardly explain in this Institute where the important and interesting results obtained by Mr. Galton in this field of inquiry have been so largely made known, that it was these that stimulated us to endeavour and do likewise in Ireland.

Anthropometric work may be made to serve many purposes, but there are two which seemed to us as specially desirable in our own case. It is very questionable whether any university or other educational institution should be regarded as being thoroughly equipped without such a laboratory. Mr. Venn, of Cambridge, has shown us how interesting the results are which may be obtained from an examination of students alone. In all our great centres of education we have the most intricate and elaborate machinery for testing the mental capacity of a student, and for estimating his standard of knowledge in different branches; but so far as I am aware, only in Cambridge and Eton are there any means in this country by which his physical endowments can be ascertained and their gradual development watched. And yet these are qualities which, in

most walks of life, are of scarcely less importance to the individual than the intellectual. We look forward with interest to the time when Mr. Galton's scheme for the awarding of marks for the physical efficiency of candidates competing for public appointments will come into general operation.

Entertaining these views we naturally have decided to commence our operations upon the students in Dublin. Already the authorities of Trinity College are interested in the project, and with their aid we shall endeavour to make it a general custom for every student as he enters college to visit our laboratory, and to continue doing so at the end of every six months during his University career. Measurements and tests applied in this way should furnish us with most valuable data.

But the second object which we have in view is the one which we are most anxious to develop and in the pursuance of which we expect to obtain the most valuable results. The physical anthropology of Ireland is almost an untrodden field. Little or no systematic work has as yet been undertaken in this direction, and yet there is no part of the United Kingdom which promises a richer harvest for the investigator. Anyone who has travelled through the country districts must be familiar with the very different types which are presented by the inhabitants. This is especially the case in outlying portions of the west coast and in the islands off the mainland. To take one example: the fair slight men of the North Island of Arran offer a marked contrast to the dark burly men of the Middle and South Islands. Then again, we have in Ireland certain very old colonies. These ethnical islands, if we may so term them, require to be very carefully studied, and will no doubt afford valuable information concerning the persistence or otherwise of racial characters.

It has therefore occurred to us that we might employ the anthropometric methods for the purpose of giving some assistance to the anthropologist in his endeavours to unravel the tangled skein of the so-called "Irish Race." With this end in view it is our intention when once we have fairly started to take excursions during the Long Vacation into the country, and with our apparatus, pitch our tent in different districts until at last we or our successors shall have traversed the entire extent of Ireland. We are already familiar with the migrations of Mr. Galton's laboratory, following as it generally does the British Association. We merely propose then upon a somewhat more extended scale to adopt the same peripatetic principle.

With our objects thus clearly defined we approached the Royal Irish Academy, and the Council at once granted a sum of money to a committee composed of Dr. Haughton and our-

selves for the purchase of instruments. The authorities of Trinity College then sanctioned the use of one wing of the handsome museum of Comparative Anatomy for laboratory purposes, and gave instructions that it should be fitted up also as a small Anthropological Department. We are now nearly ready to open the laboratory. The formal opening will take place on the 25th of June, but we hardly expect to make much progress in the work until the end of the Long Vacation.

DISCUSSION.

Dr. WILBERFORCE SMITH believed that considerable gain of accuracy might be got out of the circumstance mentioned by Professor Cunningham, that students would be especial subjects of experiment. For the results of an anthropometric laboratory were liable to be damaged by the fact that the individuals who presented themselves did not constitute natural groups, but came of their own free will. And it was with the speaker a matter of experience amongst his own patients, that capable persons such as athletes took an especial interest in undergoing measurement, whereas comparatively feeble persons such as those leading sedentary lives had little inclination thereto. Thus, on the whole, the results obtained probably furnished slightly too high a standard of physical fitness. In illustration of this tendency, they might compare the records of breathing capacity obtained by Dr. John Hutchinson half a century ago with those obtained a few years ago at the Health Exhibition. Hutchinson's cases consisted of groups of men such as policemen, soldiers, &c., whereas the persons examined at the Health Exhibition appear to have come simply at their own discretion. The mean results in both series were parallel, and had a constant relation to stature, but the breathing capacity of the Health Exhibition series was constantly a little higher in relation to stature, than that of Hutchinson, a difference which might be reasonably attributed to the different method of obtaining subjects. Now, in the case of students it would not be difficult to obtain complete groups. His own experience impressed upon him the importance of arriving at some agreement amongst persons engaged in anthropometry, as to methods of investigation which would give results capable of being accurately compared. It was probably a feeling of this kind that had induced Professors Cunningham and Haddon to give the Anthropological Institute of London the opportunity of hearing what was projected in Dublin. In the single instance of the spirometer he had reason to believe, after experiments extending over some years, that there was need of some fuller assurance than at present existed that the apparatus in use would give uniformly accurate results. The factor of resistance in the instrument to the current of expired air had not been sufficiently considered.

Mr. WALTER COFFIN, Dr. GARSON, Mr. GALTON, and Professor FLOWER took part in the discussion.

THE DUBLIN ANTHROPOMETRIC LABORATORY.

	Date of Application.				Page in Register.
	Day.	Month.	Year.		
Signature } in full.				18	
Address } when at home, in full.				Age last birthday, {	Have you been measured here before? Yes or No?
Date of } Birth,	Day of Month.	Month.	Year.	Occupation (if a Student, in what branch?)	Were your Father and Mother first Cousins?
					Yes or No?
Surnames,	Surname of your Father if different from your own.	Surname of your Mother before she was married.	What district do your Father's people come from?		Your Mother's.

Have your Father's people occupied that part of the country for
long: if not, state what you know of their original locality, }

Have your Mother's people occupied that part of the country for
long: if not, state what you know of their original locality, }

The Laboratory is in the Museum of Comparative Anatomy, Trinity College, Dublin. The Laboratory is open to the Public from 2 to 4 p.m., on Tuesdays, Thursdays, and Saturdays.

[illegible]

One page of the Register is assigned to each person in which his measurements at successive periods are entered in successive lines. A copy of these made at any specified date may be obtained on application by the person measured, or by his or her representative on receipt of a stamped envelope.

N. B.—In the case of students, it is very desirable that their measurements should be recorded every six months, so that they may thereby have an accurate means of estimating their physical as well as their mental development.

Professor CUNNINGHAM exhibited and described the skull and some of the long bones of the Irish giant, Cornelius Magrath.

*The SKULL and some of the other BONES of the SKELETON of
CORNELIUS MAGRATH, the IRISH GIANT.*

By Professor D. J. CUNNINGHAM, M.D., F.R.S.

THE skeleton of Cornelius Magrath has been preserved in the Trinity College Museum, Dublin, for 131 years. The height is 7 feet $2\frac{1}{4}$ inches, although it is questionable if Magrath was quite so tall during life.

There is reason to believe that during life Magrath suffered from acromegaly. This opinion is based upon the following grounds:—

1. The disproportionate size of the face in relation to the cranium. This increase is present not only in the maxillary, but also in the mandibular part of the face, and as a result we have an excessive depth of the orbital openings of the nasal fossæ and of the maxillary air-sinuses. The extraordinary size of the mandible is particularly suggestive.
2. The great size of the mastoid processes and the great expansion of all the air-sinuses of the skull.
3. The enormous hypertrophy of the pituitary body as evidenced by the great expansion of the pituitary fossa.
4. The evidence obtained from records of Magrath that both hands and feet were exceedingly large during life, although the bones show no trace of this hypertrophy.

But the determination of the condition is rendered peculiarly difficult from the fact of these changes being present in an individual of so great a stature as Magrath. Virchow entertains the view that there is no connection whatever between the partial giant-growth which is seen in ordinary cases of acromegaly and general giant-growth, and yet, if we study the characters of the skeleton in individuals of high stature as given by Langer, we perceive many points of correspondence. The latter author tells us:—

1. That in the skulls of all giants the mandibular region is relatively large, and in most the lower jaw is "monstrous." Further the lower jaw frequently exceeds the maxilla in its growth, so as to produce a

great projection of the chin, and to bring the lower teeth in front of the upper teeth. He figures such a skull.

2. That the increase in growth of the giant's skull affects as a rule only the facial portion. As a consequence of this the cranium remains small whilst the face becomes enlarged. He considers, however, that this excess of growth of the face is limited to its lower part, and does not affect the orbital openings nor the upper part of the nasal cavities.
3. That in typical cases of general giant-growth there is found a swelling of the pituitary body, whereby the fossa becomes expanded, and also a hypertrophy of the soft parts of the face, *e.g.*, the lips and alæ of the nose. The expansion of the pituitary fossa he has chiefly observed in cases where the mandible was of enormous size.

These observations of Langer have an important bearing upon the question under consideration, and I believe that they point to some kind of connection between acromegaly and general giant-growth. Of course a disproportion between the face and the cranium may be brought about in two ways. It may be produced by an excessive growth of the facial bones whilst the cranium maintains its normal standard. This is the true acromegalic disproportion. But it may also be brought about by a failure on the part of the cranium to keep pace with the general growth of the other parts of the body. In this case the growth of the face goes on independently and in harmony with the general growth of the individual. This is the manner in which the disproportion peculiar to giants is produced. The results are precisely the same, and yet the manner in which they are brought about is different.

But even accounting in this way for the same form of skull occurring in the two cases, how can we explain the fact that in acromegalic patients, and in giants we have the same tendency to expansion of the pituitary fossa and excessive growth of the mandible? We can only do so by supposing that to a certain extent we have the same growth influences present in each. Langer is not the only author who has drawn attention to this exaggerated mandibular growth in giants. Topinard also refers to it.

DISCUSSION.

Mr. WALTER COFFIN referred to a very pronounced case of acromegaly confined to the lower jaw, commencing in middle age, in a patient of only average stature.

Professor FLOWER and Dr. GARSON also made some remarks.

MARCH 10TH, 1891.

EDWARD B. TYLOR, Esq., D.C.L., F.R.S., *President, in the Chair.*

The Minutes of the last meeting were read and signed.

The election of B. LORD, Esq., of Warley Grammar School, was announced.

The following presents were announced, and thanks voted to the respective donors:—

FOR THE LIBRARY.

From the ANTIQUARIAN COMMITTEE.—Sixth Annual Report to the Senate of the University of Cambridge. November 26th, 1890. 4to.

From the AUTHOR.—Sculptured Anthropoid Ape Heads from Oregon. By James Terry. 4to. New York, 1891.

— Etruschi, Sardi e Siculi nel XIV° Secolo prima dell' era volgare. By Ferdinando Borsari. 8vo. Naples, 1891.

From the PUBLISHER.—Modern Customs and Ancient Laws of Russia. By Maxime Kovalevsky. 8vo. London, 1891. D. Nutt.

— Offener Brief an Professor Dr. Gustav Meyer in sachen der Ägyptisch-Indogermanischen Sprachverwandtschaft. Von Professor Dr. Carl Abel. 8vo. Leipzig, 1891. W. Friedrich.

From CUTHBERT E. PEEK, Esq.—The Publishers' Circular. Vol. liv. No. 1287.

From the EDITOR.—Nature. Nos. 1113, 1114.

— Revue Scientifique. Tome xlvii. Nos. 9, 10.

— Science. Nos. 420, 421.

From the ROYAL UNITED SERVICE INSTITUTION.—Journal. No. 157.

From the CANADIAN INSTITUTE.—Transactions. Vol. i. Part 1.

From the BENGAL ASIATIC SOCIETY.—Journal. Vol. lviii. No. 302. Proceedings. 1890. Nos. 4-8.

From the ROYAL GEOGRAPHICAL SOCIETY.—Proceedings. Vol. xiii. Nos. 2, 3.

From the ROYAL SOCIETY.—Proceedings. Vol. xlviii. No. 297.

From the ROYAL SOCIETY OF NEW SOUTH WALES. Journal and Proceedings. Vol. xxiv. Part 1.

From the SOCIETY OF ARTS.—Journal. Nos. 1997, 1998.

From the SOCIETY OF ANTIQUARIES.—Proceedings. Vol. xiii.
No. 2.

From the SOCIETY OF BIBLICAL ARCHEOLOGY.—Proceedings. Vol.
xiii. Part 4.

Mr. CHARLES H. READ exhibited some objects from the Pacific Islands and the West Coast of America, collected during the voyages of Vancouver. Mr. LISTER and Dr. TYLOR joined in the discussion.

Mr. J. J. LISTER read a paper on the Natives of Fakaofu.

NOTES on the NATIVES of FAKAOFU (BOWDITCH ISLAND). UNION
GROUP.

[WITH PLATES I TO IX.]

By J. J. LISTER, Esq.

THE Union Islands lie in the South Pacific Ocean some 300 miles north of Samoa.

They consist of four islands, viz.—*Atafu* (Duke of York Island), *Nukunono* (Duke of Clarence Island), and *Fakaofu* (Bowditch Island), which are situated in a line from N.W. to S.E.—the two former rather less than 50 miles apart, the two latter rather less than 30. The fourth island, *Swain Island*, lies some 100 miles to the south of Fakaofu. *Atafu* and *Nukunono* were discovered by Admiral Byron in 1765, *Fakaofu* by the United States Exploring Expedition, under Commodore Wilkes, in 1841. *Swain Island* is said to have been discovered by Quiros in 1560. He named it *Gente Hermosa*—from the beauty of the inhabitants. There are no native inhabitants now, but bones, and stone implements, and slabs of stone set up on edge have been found there. The people of the neighbouring islands call it *Olosenga*.

The islands were visited by Commander Oldham, R.N., in *H.M.S. Egeria*, in June, 1889, and on the three northern ones the British flag was hoisted, and they were declared to be under British protection. On this occasion a stay of only a few hours was made at each island, but in August the *Egeria* returned to Fakaofu and stayed ten days while a careful survey was made.

Owing to the kindness of Captain Wharton, R.N., F.R.S., the Hydrographer, I was in the *Egeria* at the time, in the capacity

of naturalist, and had the opportunity of making the following notes :—

The three northern islands are regular coral atolls or ring islands, consisting in each case of a somewhat pear-shaped ring of reef completely enclosing a lagoon (Plate I). At Fakaofu and Nukunono the lagoon is about 7 miles in its longest diameter, at Atafu about 4 miles. Numbers of low islets varying in length from a few yards to a mile or more, are situated on the ring of reef, and these support an abundant vegetation of cocoanuts and other trees. The islets are most numerous and largest on the eastern (windward) sides of the atolls.

The natives of Atafu and Nukunono are of the same race as those of Fakaofu, though there appears, from what I was told, to have been more intermixture of white blood in them.

Each island has a white or half-caste trader living on it, who buys the "copra" (dried cocoanut kernel) from the natives for the New Zealand firm he represents. The trader at Fakaofu is Mr. Polsen. He is a native of Schleswig-Holstein, but speaks English perfectly. Mr. Polsen was interested in reading mathematics. It was curious on going into his house in this out-of-the-way island to see the familiar backs of Todhunter's "Euclid" and "Algebra," and Tables of Logarithms arranged along his bookshelf. I am greatly indebted to him for the assistance he gave me in interpreting to the natives. His wife and two of the older women of the island were the source of almost all the information relating to the traditions of the people, contained in the following notes. Nothing pleased these ladies better than to be summoned to the verandah of Mr. Polsen's house and to be asked questions about the beliefs and customs of the people before the introduction of Christianity, which occurred about twenty years ago. Plate VI represents them adorned with cocoanut leaves to show the decorations of the old times. The method of eliciting information was as follows :—I asked my question of Mr. Polsen in English, he passed it to his wife in Samoan, the matter was discussed in the Fakaofu speech, and the answer returned to him in Samoan, to come back to me in English. I am well aware that this method of obtaining information is liable to error, and my excuse for offering these necessarily imperfect notes is that the beliefs and customs with which they largely deal exist only in the recollection of a few of the older generation of the natives, and will die with them.

Most of the natives of Fakaofu were pleased to be taken under British protection. On our first visit they did not seem to grasp the situation, but on the second they were evidently highly gratified, and very anxious, even for Polynesians, to produce a good impression.

A dance was performed in honour of our visit (the dances have been in abeyance since the coming of the missionaries), and a present of cocoanuts and fish was made (Plate VIII). I extract the following account of this function from my journal:—

“It took place on the open shingly space in front of the Samoan missionary’s house, where we were gathered. The crowd of natives, almost the entire population of the island, were assembled on the left. They advanced with slow steps chanting some kind of song; first came a small child crowned with a wreath and carrying a green cocoanut, then two children side by side, who also carried cocoanuts, then the whole body of the people, old men first, then young men and women, most of them with green wreaths and girdles, made in many cases of the tangled stems of the green dodder-like *Cassytha*, which is abundant in the islands. They carried cocoanuts, fish, and some roots of a coarse kind of taro (arrow-root).

“A halt was made before they came in front of the house, and a few of the younger men came forward with stakes—instead of clubs—which they brandished about with more vigour than skill. Sometimes they lost hold of their twirling clubs, and away they flew—fortunately doing no damage. The whole thing was, we understood, the revival of a ‘heathen’ ceremony, permitted by the king for this special and so important occasion, when their island had become part of the British Empire. The procession then moved past the house and returned, throwing down their gifts on the coral shingle. Then a grey-headed old man made a long speech, with short abruptly finished sentences, in which one detected the mannerism of the missionary preacher, saying—as we were afterwards told—how small the gifts were, and reminding us that we had come to a very poor little island, the people of which were ignorant and as the dust of the ground beneath our feet; and more to the like effect. To this Mr. Polsen replied on our behalf. Then a dance was performed, in which four old men alone took part, while the old women beat time and chanted an accompaniment.¹ The dancers advanced in single file, and in a spiral course, stepping and executing grotesque gestures in time with the song. As they advanced they became more excited, and ended with a loud shout, given all together.

“The children were much amused at seeing these reverent seniors cutting such unwonted capers.”

Physical Characters.—In their general appearance the natives looked very like Tongans or Samoans. They were well made

¹ The younger generation has grown up in ignorance both of the dances and the songs that accompany them.

and well nourished people. What struck me in their appearance was the great breadth of the lower part of the face at the angles of the jaw.

Measurements.—I took measurements of 13 men and 6 women. The results are given in the following table,¹ with those of 13 Tongan men for comparison. (I happen to have measured the same number of men in both places.)

		Fakaofu (men).	Tongan (men).	Difference.	Fakaofu (women).
Percentage to stature	Stature in inches	67.98	67.66	.32	
	{ Chest girth	59.2	53.5	5.7	55.4
	{ Arm span	108.7	104.2	4.5	103.6
	{ Finger patella index	4.8	7.3	2.5	6.1
	{ Upper limb	34.6	32.8	1.8	33.7
	{ Lower limb	50.1	48.9	1.2	49.7
	{ Intermembral index	69.65	67.	2.05	67.8
	% Forearm to arm	87.08	88.9	1.82	87.1
	% Leg to thigh	75.7	74.9	.8	75.5
	Cephalic index	80.2	84.76	4.56	82.88
	Facial angle	105.°	104.9°	.1°	104.2°

The most striking feature appears to be the great length of arm and girth of chest of the Fakaofu people. The great length of the arm is seen in the actual measurement of the upper limb, and is borne out by the high figure reached by the arm-span, the very low finger patella index, and the high intermembral index. The high proportion of the arm-span is the result of the large chests combined with the long arms.

¹ In the table the terms 'arm' and 'leg' are used in the anatomical sense; the *arm* being that part of the upper limb between the shoulder and elbow, the *leg* the part of the lower limb between the knee and ankle.

The measurements of the limbs were taken from the following points—

Upper Limb—

- (1) A point half an inch outside and on the same level as the coracoid process.
- (2) The middle of a line joining the junction of the radius and outer condyle of the humerus with the inner condyle.
- (3) The middle of a line on the front of the wrist, joining the tips of the styloid processes of radius and ulna.

Lower Limb—

- (1) A point on the front of the thigh, on a level with the middle of the line between the great trochanter and the anterior superior process of the ilium.
- (2) A point over the ligamentum patellæ, level with the external tuberosity of the tibia.
- (3) A point on the middle of the bend of the ankle, over the junction of the tibia and astralagus.

For the cephalic index the greatest length of the head was measured from a point between the eyebrows to the most projecting point at the back of the head.

The small figure attained by the finger patella index (in one man the tip of the middle finger was *only one inch* above the upper margin of the patella) is the result of three factors: (1) the long arms (2) the short thighs (this appears in the proportion of the leg to the thigh—8 per cent. more in a native of Fakaofu than in a Tongan), and (3) the comparative shortness of the spine in proportion to the height—which appears in the comparison of the length of the lower limb with the height.

Thus, though the legs are long in proportion to those of a native of Tonga, the arms are much more long and the chests are very large.

The number of women measured (six) is perhaps too small to make the averages of the measurements of much value. So far as they go, they appear to show that the women have big chests and long arms, though in a less degree than the men.

It seems possible that the great development of the arms and chests of the natives of Fakaofu may be associated with the very peculiar conditions under which they live. To meet almost every need of their lives they must take a journey in a canoe; and the heavy work of this nature would be done, as usual among the Polynesian races, by the men. Their houses are crowded together on one of the smallest islets, which is one of the few situated on the leeward side of the atoll; while the plantations of cocoanuts, yams and taro, are on the other islands—mostly on the windward side. Hence, a visit to these plantations means a canoe journey of at least six to eight miles—poling over the shallows, and paddling across the deep water of the lagoon.

On the other hand, for fish, which constitutes the other main staple of their food, a trip to sea is needed.

The action of paddling, unlike that of rowing, is done entirely with the arms and body, the legs being folded together beneath the seat.

The natives of Fakaofu have lived so long on their island, that, as stated elsewhere, I could hear of no tradition of their originally having come from another place; they supposed that their first parents sprang from the coral stones of Fakaofu.

May it not then be possible that the great length of arms and size of chest of the present race are the result of the peculiar conditions under which so many generations have lived?

I much regret that I have not a larger series of measurements, and especially of women and children, to offer. It was not till after we had left the island for good, that I worked out the percentages of my figures and became aware of the peculiarities presented by the people. There are, of course, many other small communities in the Pacific, living under

similar conditions, and it would be a matter of great interest to know whether these people present similar peculiarities to those of the natives of Fakaofu.

I obtained three skulls of natives from the piece of ground belonging to Mr. Polsen. The king, whose permission I asked, made no objection to my taking them. These are now in the collection at the Royal College of Surgeons.¹

Colour.—The colour varies a good deal in different individuals. This, I was told, was not due to intermixture of foreign blood; the paler or darker shade went in families.

I copied the colour of five individuals who represented the varieties of shade. On comparing these with M. Broca's colour types, given in *Anthropological Notes and Queries*, I find that the darkest nearly matches No. 29, but is slightly redder. Two others are distinctly lighter and brighter in colour, between Nos. 29 and 31. The remaining two which were copied from women are much paler, falling between 31 and 32 in the less exposed parts of the skin, and deepening to a browner shade than 31 on the top of the forehead and the outer aspects of the arms. These were, however, exceptionally pale women.

In the neighbouring island of Atafu, where the people are of the same race, we saw a girl who was an Albino. Her hair, eyebrows, and eyelashes, were pale yellow, but the irides were greenish brown.

The normal people have the irides dark brown, with a darker ring at the outer margin.

The *hair* is black. It varies a good deal in growth; in some people it was straight, in others wavy.

Diseases.—*Elephantiasis* is frequent among them. By far the most common disease is the skin affection known as the "*Tokelau Ringworm*." I should think that more than half the population is affected in this manner generally in large patches, but frequently investing a whole limb and in some cases covering the whole body except the scalp.

Language.—Hale, who visited the island with the United States Exploring Expedition in 1841, found that he was able to understand a good deal of the speech of the people from a knowledge of Samoan. The Samoan interpreter they had on

¹ Professor Stewart has kindly furnished me with the following measurements—

YAOPUKA, ♂, *æt.* 50 (circ.), *Fakaofu*. C., 530; L., 188; B., 147; Bi., 782; H., 142; Hi., 755; BN., 104; BA., 102; Ai., 981; Nh., 59; Nw., 27; Ni., 458; Ow., 43; Oh., 37; Oi., 860; Ca., 1590.

LANGITASI, ♂, *æt.* 60 (circ.), *Fakaofu*. C., 525; L., 188; B., 137; Bi., 729; H., 141; Hi., 750; BN., 104; BA., 99; Ai., 952; Nh., 58; Nw., 28; Ni., 453; Ow., 42; Oh., 37; Oi., 881; Ca., 1650.

board was able to understand them when he had become used to inserting the K sound (thus Samoan Fa'aofu = Fakaofu) and one or two other similar changes.

In this respect as well as in the substitution of H for S in Samoan the Fakaofu speech resembles Tongan. I found on reading some of the sentences which I wrote down in the Fakaofu speech to an oldish man in Tonga that he understood them. It is more like the old Tongan—of which examples are given in *Mariner*—than the modern Bible Tongan of the missionaries.

Mr. Polsen told me that he had received a parcel from New Zealand done up in a Maori newspaper. His wife on looking at this found she was able to make out something of it, and when he pointed out certain constant changes, as *f* into *wh*., e.g., Maori *whare* = Fakaofu (*Fale*, a house), she was able to gather the gist of a story the paper contained.

Only the old people use the Fakaofu speech now, the young ones are taught to read in Samoan, and this is the language used in church.

Gestures, &c.—As in Tonga one sees people raising the eyebrows for an instant, whilst making an affirmation; and if the reply amounts to a sentence they are raised several times whilst it is uttered.

The head is shaken in negation. Beckoning is effected by a downward movement of the raised arm, the palm of the hand being carried towards the beckoner.

I noticed a curious sound used to threaten children. When a child hesitated to carry out an order, the person who gave it uttered a sound (the terminal sound of the letter N) at first very low, gradually and slowly ascending the scale. By the time it had reached a moderately high note, the effect was so serious that the child, unless it was very naughty, became obedient, and went about its business.

I saw two boys quarrelling, which was not a common event. The matter did not come to blows. They stood perfectly still some distance apart, looking at one another under lowering brows for several seconds. Then a quick threatening movement on one side would be responded to by a defiant one on the other, and then followed another spell of mutual inspection. These became longer and longer, and the threatening movement less and less energetic until they each went their own way, and the incident was over. The whole was conducted in perfect silence.

Mythology.—My enquiries into the old mythology resulted in the following information:—

Tui Tokelau, "the ruler of Tokelau," was the chief of the gods, and ruled on earth and in the sky.

He was also present in the stone which stood in the centre of the island.

This is described in the narrative of the Wilkes' expedition as being ten to fourteen feet high, and wrapped round with mats. The stone is said to have been broken in pieces by the first white missionary. A large piece of it used to lie about when Mr. Polson first came—it has since been used in building up the side of the island. He said it was not carved.

Good and bad fortune and diseases were sent by the *Tui Tokelau*; the bad fortune came as punishment for failure in the proper observances in his honour.

Sick people were washed with cocoanut water, some of which had previously been sprinkled over the stone.

If a person wished to die, he would crawl to the foot of the stone and remain there. His friends might bring him food and he might eat it, but in the course of two or three days he would die—and people had been known to die in this manner, so great was the power of their belief.

If a good haul of fish was taken, part of it would be offered before the stone by the king, and afterwards it was distributed among the *Taulaitu*¹—the priests.

A yearly feast was held in honour of the *Tui Tokelau*, and the people of Nukunono and Atafu came over with offerings of mats and pearl shells—the mats being hung to the masts of the ships as they approached, to display them. When they landed, the mats were wrapped round the stone, to remain until they rotted away, and the pearl shells were placed along the eaves of the house sacred to the god, close at hand. (Hale describes the stone wrapped round with mats, and the pearl shells hanging from the eaves of the house. There is a picture of the house in Commodore Wilkes' account.) The stone was anointed with cocoanut oil scented with flowers; then the king was carried in front of the stone, seated in his chair, with the cocoanut leaf emblem of royalty round his neck,² and a black line of charcoal drawn over his forehead—the people following in procession with shouts of "*Tu-tu*" and general rejoicing.

Turner³ gives some details of the beliefs of the natives of Fakaofu, which he obtained from a boy belonging to the island, who had attended the missionary schools in Samoa. He says that *fire* was regarded as sacred to the *Tui Tokelau*, and it was

¹ *Taula*, a priest; Samoa, *taura*; Hawaiian, *taula*, prophet (Hale).

² *Vide infra*, p. 53, and Plate III.

³ "Nineteen Years in Polynesia," p. 526.

forbidden to use it at night except on special occasions. The story of fire having been first obtained by Talanga, who descended to the regions beneath the earth, is almost the same as the Samoan one.

If any unauthorized person entered the house sacred to the god, he would be burnt, at night, by the mysterious "fire of Tui Tokelau."

Another god was named Semoana, and his stone stood beside that of the Tui Tokelau, but was smaller.

A third was named Fakafotu. He was the god of storms and hurricanes, and thunder was called "*the anger of Fakafotu*."

I heard nothing of Tangaloa, the widely recognized god of Polynesia. Hale, however, says that they spoke of "*Tungaloa i lunga i te langi*"—"Tangaloa above in the heavens."

In addition to the generally recognised gods, of whom there were many besides those mentioned, certain animals were supposed to possess supernatural powers, and were called "*aitu*." Pritchard, speaking of the family gods (*aitu*) of Samoa, says: "These private gods were supposed to dwell in some tangible object or thing which was held in the highest veneration by the individual whose god was enshrined in it, though others might abuse it with impunity" ("*Polynesian Reminiscences*," p. 107). In Fakaofu the "*Feki*" (the octopus) was the "*aitu*" of certain families, who always abstained from catching or eating it.

The "*Pusi*" (a species of *Muræna* which frequents the reef, much dreaded by the natives for its severe bites) was another family *aitu*.

They never offered human sacrifices, and never killed children to propitiate the gods if any calamity was impending.

Future Life.—After death the king and the priests, with their families, went to the moon, where they enjoyed all sorts of pleasures.

The common people went to a region far away, which though inferior to the moon, was still a place of many delights, where there was constant dancing and feasting, fruits were abundant, and where wreaths of flowers grew naturally in the women's hair. From here they supposed that their ancestors went to the land of white people, and were born again as "*papalangi*" (white people).¹

They had no idea of a place of future punishment, and none of transmigration into animal bodies.

Origin of the World.—The sea and sky were always in existence.

¹ This is of course a modern view. I was told that for some time the country of white people (in general) was called "*America*," probably a result of the visit of the Wilkes' Expedition. Hale and Dana describe how they were supposed to have descended from the skies.

Men came originally from the stones of the ground, "as a chicken comes out of an egg."¹

The first to appear in this way were named Kava and Singano who were both men.

After them came Tiki-tiki (a man) and Talanga (a woman), and from them all mankind are descended.²

Their son was named *Lu*.

Now, until the time of *Lu*, the heavens were low down, resting so close to the earth that men had to crawl about like creeping things; and *Lu* heaved up the heavens off the earth on his shoulders, saying, "*Apei pei i é te langi o te Atua elu te kena*" ("Rise up, rise up, oh heavens, till you reach God"); and having lifted them as high as he was able, he called on the twelve corners of the earth for help. Then the winds, and water-spouts, and hurricanes came and carried up the sky to its present height.³

And *Lu* gave names to the winds from the twelve corners of the earth as follows:—

North	....	....	....	....	Matangi Tokelau. ⁴
North-north-east	....	....	....	....	" Fakalua.
East	....	....	....	....	" Tonga. ⁵
East-south-east	....	....	....	....	" Sulu.
South	....	....	....	....	" Sema.
South-west	....	....	....	....	" Lafalafa.
South-west (nearly the same direction)	....	....	....	....	" Lakilua.
West-south-west	....	....	....	....	" Fakatiu.
West	....	....	....	....	" Laki.
West-north-west	....	....	....	....	" Palapu.

(The other two names were forgotten.)

Lu was the first man to "cry to God."

¹ Note, in connection with this explanation, the Fijian story of the origin of the human race from two eggs which were found and incubated by the god Dengei. Pritchard, "Polynesian Reminiscences," p. 394.

² In *Tahiti*.—*Ti'i* is said to be the name of the first man, and also another name for *Ta'aroa* (= *Tangaloa*).

In *Rarotonga*.—*Tiki* was the first man, and he rules over the dead—a dead man has "gone to *Tiki*."

In *Samoa*.—*Ti'i-ti'i* was the god who supports the islands. Hale, "United States Exploring Expedition."

³ In *Samoa* this exploit is performed by *Tiitii*, the son of *Talanga*, who was a man. The heavens are said to have fallen on the earth, and he raised them. His footmarks (6 feet long) are shown. (Pritchard, "Polynesian Reminiscences," p. 114.)

⁴ Hale states (p. 171) that *Tokelau* is the name of *East* and *South-east* trades in *Tonga* and *Samoa*—for the *North-west* in *Tahiti* and *Rarotonga*, and for *North* in *Nukuhiva*. It means the north-east side of an island in *Hawaii*. He says the word means in the *direction of the open sea* (not a very distinctive name for any wind in most of the islands). *Matangi* = wind.

⁵ Hale states (p. 171) that *Tonga* is the name for the *south* wind in *Samoa*, *New Zealand*, *Rarotonga*, *Tahiti*, and *Hawaii*; but says that it is stated to mean *east* wind in *New Zealand* in Professor *Lee's* vocabulary "by mistake."

He also drew the trees and other plants out of the ground, pulling them as though with a rope.

He drew Nukunono and Atafu and Samoa, and the land of the Papalangi (white men) from the sea, "laying hold of them by the roots of the cocoanut trees."

The land of white people was drawn out first, which explains why they are so much in advance of other peoples.

There is no tradition that the Fakaofu people came originally from Samoa or elsewhere. The kings are said to be descended from Kava and Singano, the first men, who came from stones.

Time was reckoned by days, months, and years.

I was given the names of twelve months as follows:—

<i>Fakaofu.</i>			<i>Samoa.</i>		
1.	Palolo muamua	...	Palolo mua	....	June.
2.	Palolo lua	....	Palolo muli	....	July.
3.	Mulifa	....	Mulifa	....	August.
4.	Takaogna	....	Lotuaya	....	September.
5.	Selinga-mua-mua	....	Taumafa mua	....	October.
6.	Selinga lua	....	Taumafa muli	....	November.
7.	Utua mua mua	....	Utua'a mua	....	December.
8.	Utua lua	....	Utua'a muli	....	January.
9.	Vainoa				
10.	Fakaafu	....	Fa'aafu	....	February.
11.	....	....	Lo	....	March.
12.	Caunono	....	Aununu	....	April.
13.	Oloamanu	....	Loamanu	....	May.

It seems that Vainoa, the ninth on the list, may be the name of the intercalary month—inserted occasionally to make up for the deficiency caused by reckoning from lunar months. In this case I was given no name for March.

The Samoan *muli* (= after—or behind) corresponds with the Fakaofu *lua* (= 2nd).

It is curious that the word Palolo should occur in the Samoan names of June and July, as October and November are the months in which the Palolo worm is taken. I was told that the worm is unknown in Fakaofu.

The name for February—identical with that used in Samoa—is derived from *afu* (perspiration), this being the hottest month of the year.

Society.—The king was chosen by the whole body of the people—a middle-aged or old man belonging to the royal family.

Two islets of the atoll were set apart as his property. Besides his civil functions, he officiated at ceremonies.

When he went abroad he wore a peculiar chaplet made of cocoanut leaflets round his neck. When not in use this royal

chaplet was hung in a special place in the house, where fresh fala (*Pandanus*) fruits were kept, sacred to the Tui Tokelau.

The death of the king was the occasion for the planting of cocoanuts. If anyone planted them at other times he would die.

If a man of the royal family married a woman of another family, his sons were eligible for the kingship. But the sons of a woman who married out of the royal family were not eligible.

The Taulaitu—the priests, chosen by the king, formed an upper class in society.

Disputes were settled by a judge known as the "Palapalau," who pronounced judgment after consultation with the king and the Taulaitu (priests).

Punishments were generally mild—the offender being set to make a certain length of rope or a certain number of fish-hooks for the king. Death by strangling was, however, sometimes inflicted—as for stealing food in time of scarcity.

Property.—Two islets belonged, as we have seen, to the king. Two others were common property, and the rest were divided up as the property of individuals.

On the death of a man his land was divided up among his children, the eldest, whether son or daughter, receiving the largest share, and the rest in proportion to their ages.

Marriage.—A man might take several wives, but the first was always the chief wife.

There appears to have been no special wedding ceremony except feasting.

The relatives of a maiden had small burns dotted over their face and chest in token of their pride in her. In case they had to appear without these decorations they felt that the family had been degraded.

I was told that a man went to live with his wife's people; I suppose in the case of the first wife only.

Burial.—The body of a dead person was anointed with oil and wrapped in mats, a shell ornament, described as resembling the pearl shell shank of a native fish-hook, being suspended in front of the neck.

The body was placed in the grave lying on the back, and with the knees bent to the utmost extent, so that the leg was parallel with the thigh. The thigh was extended in line with the body. Two leaflets of the coconut were laid transversely across the chest.

No food or weapons were placed in the grave with it.

The grave was about three feet deep; a mound of coral shingle—of which the island is mainly composed—was raised over it, with a vertical slab of stone at the head, and other slabs laid on the top and sides of the mound.

A funeral dance, called a *tangi* (mourning), was performed by the relatives, who shaved the crowns of their heads (like a monk's tonsure), and burnt spots on their chests and faces.

For five nights after the burial the relatives came to the grave, and removing the stone which lay over the region of the head, poured cocoanut oil into the heap. This function was acted before me, a little heap of stones being made, with large ones, to represent slabs, over them; one of these was removed and water poured, instead of oil, with a cry of mourning.

The anointing the grave with oil is still performed in Tonga.

A representation of the dead person was often tattooed on the upper part of the chests of the near relatives. Plate II is a sketch of the present king, and shows four such figures on his chest.

He described the figures as follows:—

The upper figure on his left hand side represents the last king. That on the right hand side was a female relative, the wife of a Samoan living on the island. Of the lower figures that on his left represents a son, that on the right a daughter. The marks between the upper and lower figures, and those on either side within the line of the shoulder, represent children who died young. The markings on the upper parts of the arms are simply ornamental.

The queen had a similar figure on the right side of her chest, and at Atafu I saw an old man marked similarly to the king. Many of the old people are, however, without the figures.

The ordinary ornamental tattooing was not nearly so elaborate as that of the Samoans and Tongans.

The most tattooed person that I saw was an old man, who told me that formerly many were tattooed much more than he.

He had two bands across each cheek, passing from in front of the ear forwards and downwards towards the mouth. Each band consisted of an upper and lower line, the space between being filled in with oblique cross lines. A similar band encircled each wrist, and several interrupted lines were traced round the lower part of each forearm. There were two horizontal bands across the gluteal region, a representation of a fish over the hip joint, and a circular ornamentation above, at the crest of the ilium. A transverse band was tattooed across each calf, limited to the back of the leg, and there were interrupted lines above and below it; a single line surrounded the leg above each ankle.

Many, if not all, of the old women, were tattooed with triangular markings round the mouth, each triangle having its base to the margin of the lip, and the apex pointing up or down. There were ten of these, five above and five below.¹

Beside these markings and those of her dead relative and children, the queen was tattooed about the shoulders and upper part of the arms in a similar manner to the king. She also had a large quadrangular figure over the upper part of her back with cross lines, resembling a fishing net, and rows of fishes on each side.

The lobe of the ear is pierced by a largish slit—to hold a leaf or flower, or other ornament.

The hair used to be dressed with lime; but the custom is now abandoned—they would be pleasanter companions if it were not.

Dress.—The dress of the men in the old times consisted of the "*malo*"—a narrow strip of matting encircling the waist as a girdle, and passing between the legs.

The women wore the *titi*²—a heavy fringe reaching from the waist nearly to the knee. Common ones were made of leaflets of the cocoanut—better ones of the pandanus, the strips of which were fastened in separate small bundles to the girdle of plaited cocoanut fibres.

Ornaments.—A single shell or whale's tooth was worn on the forehead or hanging on the breast. Strings of white cylinders, made by grinding down shells, were worn on the head or round the neck.

Wreaths of leaves and flowers were also worn. The kanava flower (*Cordia* species) was a favourite, and at the dance which was got up in our honour, many of the people wore tangled wreaths of the dodder-like *Cassytha*, which abounds on the islets.

Musical Instruments.—The lala, or wooden drum of the island, was constructed on the usual plan, consisting of a cylindrical log of wood, some five to six feet long, hollowed through a narrow opening along one side. It is struck with a heavy beater, and gives out a deep note. It is now used as a church bell.

Fighting.—I was told that the people of Fakaofu were great fighters in the old time—the islands of Nukunono and Atafu being subject to them. It was also related that they had beaten Samoa in fight!³

Their arms consisted of *clubs*, *stone axes* made from the clam

¹ Cf., the *Maori* custom of tattooing the women's mouths with lines and festoons on the lower lip.

² *Titi*, a cincture made from the leaves of the *Dracæna terminalis*. Tonga and Samoa. (*Dracæna australis* = the New Zealand *ti*, tree). Hale, "United States Exploring Expedition," p. 333.

³ Hale, on the other hand, saw no arms, and considered that they might be ignorant of war.

shells, spears of old cocoanut wood (which is very hard), and bows and arrows.

They had no armour, but went to fight with their bodies freshly oiled.

The leader in their fighting would be chosen from among the party.

Canoes.—I was told that in the old times they had two vessels—each with two masts and without outriggers—described as being as large as the trading schooners which visit the island. Each of these would hold, it was said, all the available fighting men in the island—perhaps 150 to 200 men.

The canoes at the present time are built just like those of Samoa—having a single outrigger. Owing to the scarcity of large trees on the island, the body of the canoe is built of several pieces each separately hollowed, and these are laced together with sinnet (plaited cocoanut fibre). Often there are as many as four distinct pieces along the bottom, and the sides are built up with additional pieces to the required height. Each piece is accurately shaped so that it will fit in among the neighbouring ones, and the joins are caulked with resin. The bow and stern are covered in for a short distance, and on their upper surfaces a number of small pyramidal projections are left in the middle line, to which the white shells of *Cypræa ovula* are attached for ornament. The upper surface of the stern piece is not horizontal, but slopes obliquely downwards to the end.

The canoes would hold seven or eight people.

The bailers are scoop-shaped and cut out of a solid piece of wood, with a handle left projecting in the middle of the concavity.

The paddles have longer blades than those of Samoa—in botanical language they are oblong acute, not ovate. This difference may be due to the small size of the timber on the islets.

Houses.—The mode of building houses has changed of late years, and there are now none of the old-fashioned style left.

Pictures of the old style of house are given in Commodore Wilkes' account—with the eaves reaching nearly to the ground. They were oblong in shape, supported by posts at the four corners—the posts being in the walls of the house—not standing in the space included within the walls as in Samoan and Tongan houses. The house of the Tui Tokelau was, however, like a Samoan house in this respect, though it was oblong in shape—not oval.

There were no walls, but a low fence or railing formed a definite limit to the inside of the house. The open sides could be closed with screens of plaited cocoanut leaves at pleasure.

Fishing.—Nets. Like the Samoans they used a netting needle and mesh exactly like ours. The material was twisted cocoanut fibre. The nets were often of great size. I was told that some were as much as 200 fathoms in length.

Bags made of netted cocoanut fibre cord are used.

Fish-hooks.—These are made of various materials.

Large ones (for sharks?) are made of wood.

The hook consists of two pieces (*a* and *b*, Plate IX, Fig. 1), each cut from a forking branch. The larger piece (*a*) forms the greater part of the hook—the line being attached to one end. To the other end is lashed one arm of the second piece (*b*), the other arm projects, forming the barb.

The large hooks are about a foot long, and have the lashings protected by wrappings of the strong spathes of the cocoanut (a small hook of this pattern is represented in the figure).

A very simple form of hook is made of cocoanut shell. These are shaped like the wooden hooks, but are all cut out of one piece; they are of course slightly concave on one side and convex on the other.

Other hooks are made entirely from bone (Plate IX, Fig. 2).

What appears curious about these hooks is that the barb or point approaches so near the shank, that it is astonishing the fish should be secured by them. No doubt, however, they serve their purpose.

The smaller hooks are more delicately fashioned, and are of a widely spread pattern. The shank is made of a piece of pearl shell, in other cases of some gastropod shell, and the barb of turtle shell or of bone, is fastened to it. White feathers are fastened on to the two ends of the shank. These hooks are evidently intended to represent small fish, the glistening pearl shell shank closely resembles the white under side of a fish, and in some cases the feathers are so fastened that the front ones resemble the two lateral fins, and the end one the forked tail fin of the fish.

The *Octopus* bait was made on the same plan as those of Tonga and Samoa—*i.e.*, with a mottled cowrie shell for a body, and a tail with slips of cocoanut leaflets fastened to it. It was, however, not so *rat-like* in shape as the bait is in those islands; and I found that though they have a version of the widely spread rat and octopus story—they do not look on the bait as representing a rat.

Drills.—The well-known drills described in Wilkes' account were in use at the time of our visit. One which I saw had a nail used as a point. An old man made a rough one for me, and he used for a point one of the five teeth of a sea urchin—enclosed in its conical apparatus of plates.

I was told in Tonga that similar drills are well known there.

Axes.—I obtained a number of small cutting implements made by grinding down pieces of clam shells. One that was brought off from the island of Atafu, had one of the natural grooves of the shell deepened—to allow it to be attached to a handle after the fashion of an axe. There is no hard volcanic stone to be found nearer than Samoa.

Turner was told (*loc. cit.*) that it took from ten to thirty days to cut down a tree with these implements.

I saw small shells being used for slicing taro, &c., in preparation of food.

The round boxes, which Wilkes describes, cut out of a single piece of wood, and with an accurately fitting lid, are still in regular use.

Fire was obtained in the usual way, by rubbing a pointed piece of wood in a groove in another piece.

Food.—Besides fish and cocoanuts, and shell fish, they obtained seabirds at night from their roosting places on the trees. Wild yams grew on some islets, and a kind of wild taro called "Pulaka." The outer part of the ripe fruit of the fala (*Pandanus*) is also eaten.

Young *frigate birds* were often brought from the islets, where they nest, and kept on perches near the houses. I saw several of these tame birds about the islands. I was told that long after the birds can fly they come back for food, and when they are soaring high up aloft, the cry of "ika! ika!" (fish) will bring them wheeling down to settle on the upstretched arm.

History.—The traditions seem to go back only a short distance into the past.

I could hear of nothing of their ancestors having originally come from Samoa, or elsewhere. The tradition was that their ancestors had sprung from the stones of the island.

I was given the names of 15 kings, including the present one. They are—

- | | |
|---------------|------------------------|
| 1. Kava. | 9. Avafatu. |
| 2. Tai. | 10. Savaike. |
| 3. Telaufue. | 11. Letaiolu. |
| 4. Temafanga. | 12. Lika. |
| 5. Leōōa. | 13. Langitasi. |
| 6. Foōōa. | 14. Vaopuka. |
| 7. Pofou | 15. Kava (or Tetaulu). |
| 8. Tāūpē. | |

I was told this list first in the order here given, and then in

Saipuniana was sleepy she would go and walk about. So she went up and straight to the fala tree where Tasi was hidden. Then he slipped down, undid the cord from her wrist, making it fast to the tree instead, and they went off to the canoe and left the island.

Now when Saipuniana awoke, he began pulling at the cord for Hina to come, and finding the resistance he pulled harder. and called "Hina, hau!" ("Hina, come"). At last he got in a rage, and pulled with all his might, and down came the fala tree. But Hina was gone.

Meanwhile the other nine canoes had recovered from their enchantment, and had put back to shore. And Ulu came first to land. And the parents stood on the shore and called to him as he came,

*"Ulu e alo mai te vaca iacoy.
Au te fesiliatu ia Hina si-aku tama.
Penau siki penau fasa.
Oli oli i toku manava.
Hina safea Hina kavea!"*

Which may be rendered, "Oh, Ulu, come quickly in your canoe, I ask you for Hina, my darling child (whom I have brought up), whether carrying her or correcting her, the gladness of my embrace. Hina taken up and carried away."

And Ulu had to reply, "No, she is not here." Then they were angry, and drove him off.

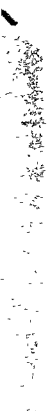
And when Iva came they addressed the same words to him, and he too was driven off, and so with Valoo, Vitoo, Ono, Lima, Va, Tolu, and Lua.

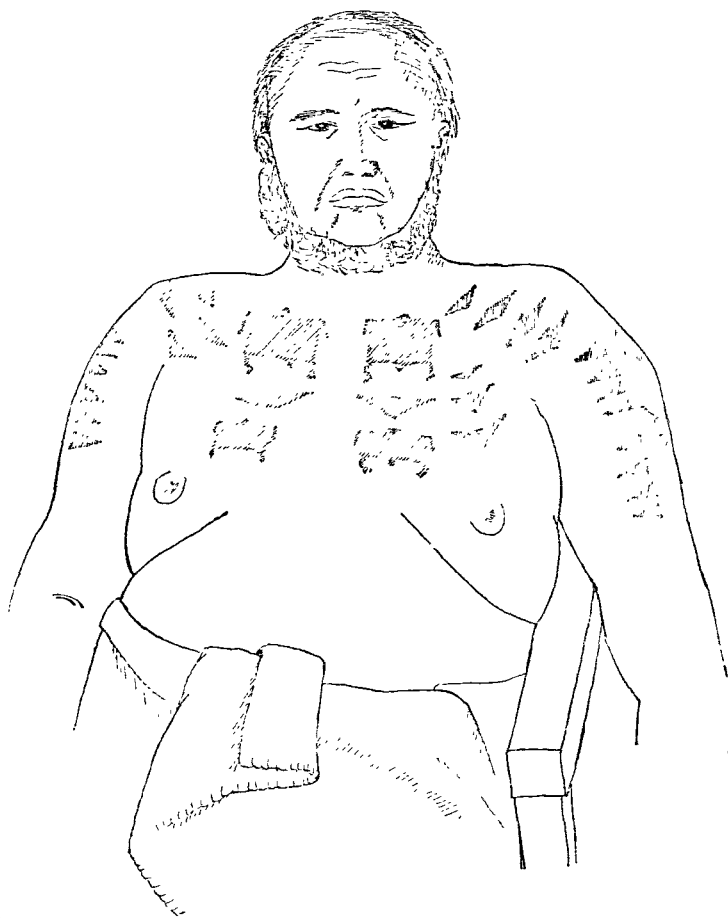
At last Tasi came, and they called in the same way, "Oh Tasi, come quickly in your canoe," &c. And he answered, "Here she is," and the parents embraced Hina, and rejoiced over her.

Then they said, "Since Tasi has brought our girl back to us, he who has always been the last of his brothers shall henceforth be the first, and Ulu who was reckoned first shall be last." And so the meanings of the names of the numbers were changed in honour of Tasi, and ever since Tasi has stood for one, Lua for two, Tolu for three, Va for four, Lima for five, Ono for six, Vitoo for seven, Valoo for eight, Iva for nine, and Ulu for ten.

It is interesting to note in the parents' speech to the sons as they returned from their journey—a sort of metre in the third and fifth lines, and in the fifth—"Hina safea, Hina kavea,"—rhyme as well.

Both rhyme and metre are known among other peoples of the Pacific (as in Tonga and Fiji).





SKETCH OF THE KING OF FAKAOFU SHOWING THE TATTOOING ON HIS CHEST.



FIG. 2.



FIG. 1.



FIG. 2.

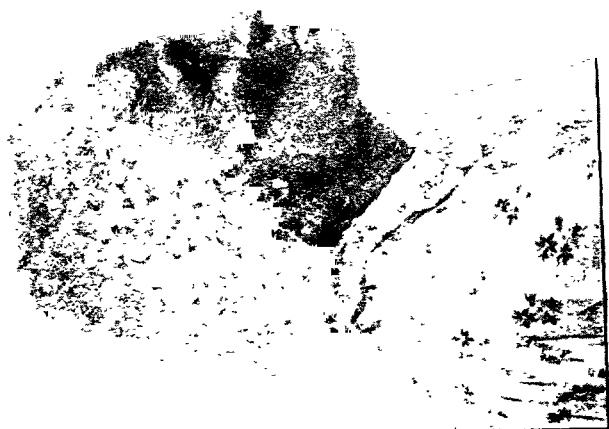
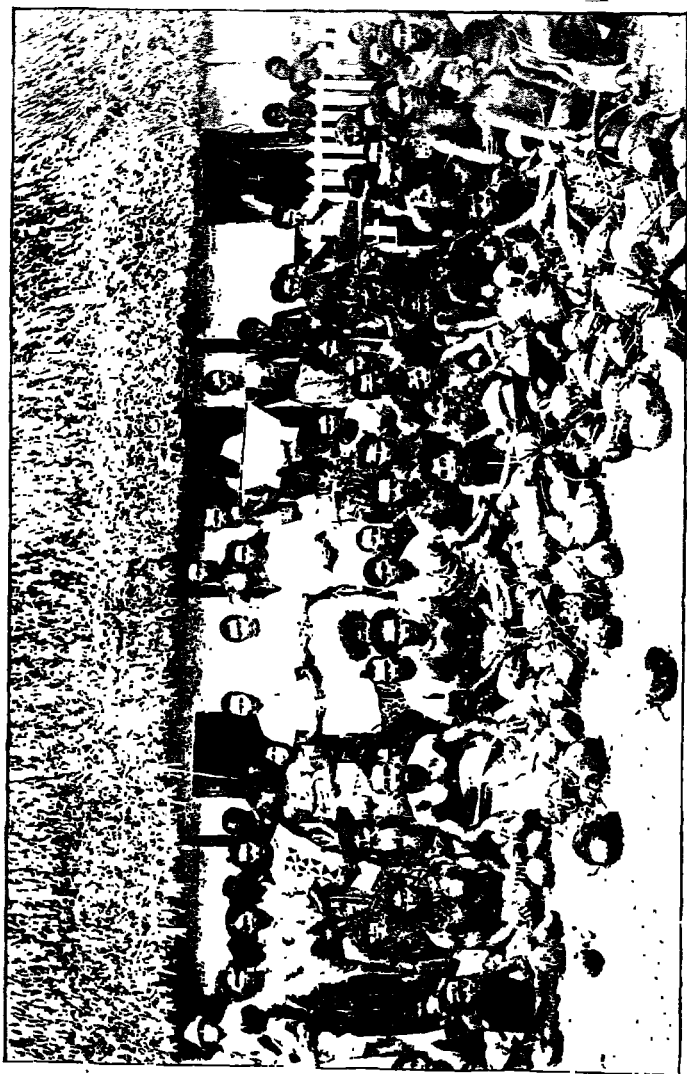


FIG. 1.









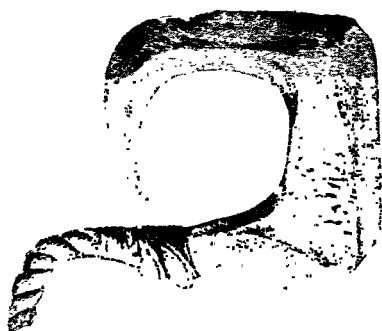


FIG. 2.



FIG. 1.

DISCUSSION.

Sir JOSEPH LISTER, commenting on the results of the measurements of the natives of Fakaofu, and the suggestion that their long arms and large chest girths—as compared with the natives of Tonga—were due to the peculiar conditions, involving almost constant use of canoes, under which they lived, remarked that he would not have expected the frequently repeated action of paddling to have produced lengthening of the arms, though he could understand its resulting in increased size of chest. He pointed out that the natives of Tonga, too, were accustomed to use canoes, and hence it was not clear that the peculiarities of the natives of Fakaofu could be referred to the cause assigned.

Professor STEWART, Mr. READ, and Dr. TYLOR also took part in the discussion.

Mr. LISTER replied that though the Tongans use canoes, canoe work is not so essential a part of their lives as is the case with the natives of Fakaofu. A native of the Island of Tongatabu has many avocations quite apart from the sea, living on an island twenty-two miles in length, and many villages are situated some distance from the water. The natives of Fakaofu, on the other hand, live crowded together on a small islet situated on a ring of reef, and to meet every need of their lives they must do more or less paddling.

Explanation of Plates.

- I.—Map of Fakaofu (Bowditch Island). From the Survey of H.M.S. *Egeria*, 1889.
- II.—Sketch of the King of Fakaofu, showing the tattooing on his chest.
- III.—Fig. 1. The King of Fakaofu wearing the emblem of royalty. The tattooing does not appear in the photograph from which the plate is prepared.
Fig. 2. The Queen of Fakaofu, in full face.
- IV.—Fig. 1. The Queen of Fakaofu, in profile.
Fig. 2. A woman of Fakaofu.
- V.—A woman of Fakaofu.
- VI.—Three women of Fakaofu.
- VII.—Son and daughter of the King of Fakaofu.
- VIII.—Group of natives of Fakaofu, with present of cocoanuts and fish.
- IX.—Fish-hooks used by the natives of Fakaofu.
Fig. 1. A wooden hook, half size.
Fig. 2. A bone hook, real size.

ANTHROPOLOGICAL MISCELLANEA AND NEW BOOKS.

"African Aphorisms; or, Saws from Swahili-Land." S.P.C.K., 1891. Collected by the Rev. W. E. Taylor. M.A. The volume contains an interesting collection of nearly 400 proverbs, with explanations where necessary.

"Anthropological Studies." By Miss A. W. Buckland. (Ward and Downey, 1891.) The sections into which the work is divided into are:—The birth of Anthropology; Astronomical theories; The antiquity of man; The origin of man; Geographical distribution; Migrations; Primitive agriculture; The serpent in connection with metallurgy; Serpents and precious stones; Divination by the rod and by the arrow; Birds in the mythologies of various races; Traces of prehistoric intercourse between east and west; Surgery and superstition in neolithic times; On tattooing; Traces of prehistoric commerce in Europe; and Primitive instruments of music.

"The Evolution of Property from Savagery to Civilisation." By Paul Lafargue. (Swan Sonnenschein, 1890.) 8vo., 174 pages. The author states: "In this essay I propose to treat of the various forms of property anterior to its assumption of the capital form." The titles of the chapters are:—Forms of Contemporaneous Property, Primitive Communism, Family or Consanguine Collectivism, Feudal Property, Bourgeois Property.

"Darwinism: a Fallacy." By W. W. Pocock. (C. H. Kelly, 1891.) 8vo., 160 pages. Two of the points raised by the author are (p. 28): "Though we admit the struggle for existence prevails just now, there is no evidence that it has always existed;" and, "Though it be admitted that the fittest will survive, it by no means follows that this fittest is superior to its progenitors."

"The History of Modern Civilization." (Chapman and Hall.) 9s., pp. 585. The aim of the handbook is to give to young students a comprehensive view of the progress of the nations, as far as it is known, out of the decadence of ancient civilization, through mediæval barbarism, until they emerge in modern and advance to contemporary civilization.

The work is based on the work of M. Ducondray, "*Histoire Sommaire de la Civilisation.*" The headings of the chapters are:—Christianity; Reorganization and fall of the Roman Empire; The barbarian invasions; Germanic Society; The Eastern Empire;

Restoration of the Empire of the West; The Arabs, the Caliphates of Bagdad and Cordova; Mussulman civilization; Feudal and Christian Europe to the fourteenth century; Society in the Middle Ages; Modern states in the fifteenth and sixteenth centuries; Great maritime discoveries; The Renaissance in the fifteenth and sixteenth centuries; The Reformation; The seventeenth century—religion, politics, trade, and finance; Literature, arts and sciences in the seventeenth century; The French Revolution; Literature and Art in the nineteenth century, &c.

"The Intercranial Circulation, and its Relation to the Physiology of the Brain," by James Cappie, M.D. Edinburgh (James Thin), 1890. The scope of the work is indicated by the author in the preface (p. 9). "Then, what appears not a little surprising, is the circumstance that the peculiarities of the encephalic circulation, so numerous and so striking, now receive less attention than they did in the early years of the century. It is with some hope of reviving interest in these peculiarities, and to point out certain modes in which they can exert an influence on the brain's activity, that I now venture to submit the following Essays."

"Greeting by Gesture," by Garrick Mallery (reprinted from the "Popular Science Monthly" for February and March, 1891). The author states: "The main divisions of the subject now to be considered are. I. Salutations with contact; and II. Salutations without contact. Under the first division it is convenient to notice successively those connected with the sense of—1, touch; 2, smell; 3, taste; although that is not the probable order of their evolution."

"Nicaraguan Antiquities." By Carl Bovallius. 4to, 1886. "The antiquities were found for the greatest part in the island of Zapatera, the rock carvings in the islet of Ceiba close to Zapatera, only some few ceramic objects are from the island of Ometepe. All these localities are contained within the territory occupied by the Niquirans, and on this account may probably be considered as specimens of Aztec art, or of an art very closely related to this." The work is very fully illustrated.

"The New School of Criminal Anthropology." An address delivered before the Anthropological Society of Washington, April 21st, 1891, by Robert Fletcher, M.D., Retiring President. In this lecture the present condition of the science is reviewed.

"History of Octroi Taxation."

"FOREIGN OFFICE REPORT, No. 192, Miscellaneous Series." By Consul O'Neill. It will not be useless or uninteresting to glance at the past history of octroi taxation as well as at its present position in European countries at the present day. If age and universal custom in the past sanctioned and justified the imposition of a

duty, then surely this form of contribution can be amply defended. Duties in every respect similar to the octroi of the present day formed a regular part of the tributary system of Rome in its earliest days; for if we go back beyond the Empire and beyond the Republic, again to the days of the Kings, we find them in full force, and the popular voice already agitating against them. Livy asserts that under the name of "Vectigal" duties upon articles of consumption were levied with the "portoria" or general duties upon introduction at the city gates; and he also tells us that these were all suppressed, and the people freed from them, upon the expulsion of "the last of the Kings," Tarquinius—*portorii et tributis plene liberata*. But not for very long, for under the Republic the same author testifies that they were re-established. By Cicero, again, we are told that the "portoria" were suppressed in Italy in his day, not so much because of their weight as because of the vexations and annoyances at all times inseparable from their collection—*non portorii onus sed portitorum injuria*. But again they were introduced in the time of the Emperors, and, side by side with the taxation of articles imported from abroad, these duties appear to have been greatly extended. After the fall of the Roman Empire this system of taxation partook, as was natural, of the general confusion that reigned throughout the country. Only one thing is clear, they were everywhere imposed in some shape or form. Contributions which had been submitted to from the earliest periods of Roman history were not likely to fall into disuse in the age of feudal oppression, and feudal lords of every degree amply availed themselves of them. There was not a village or hamlet of Italy that did not pay to its signoral lords the duties imposed on articles of consumption and merchandise introduced within its limits, and hardly a bridge existed on which transit dues of the same kind were not imposed. With the decline of feudalism and the extension of popular government, which accompanied the growth of the Italian free cities and republics, there was a gradual suppression of this among other forms of feudal tyranny, and out of the chaos of indiscriminate and universal indirect taxation that had existed some system and order were restored with the renewed security given to trade. But whilst roads were opened, and the country was cleared of feudal obstruction, indirect taxation at the city walls appears to have been constant, and to have formed a chief source of revenue for the Italian republics even at the most brilliant period of their commercial development. That these duties died slow and died hard, there can be no doubt, but that they did die in many parts of Italy, and more especially in liberal Piedmont and Tuscany, the official statistics have shown.

Strong popular movements appear generally to have swept them clean away, and perhaps Italy affords the only instance where a revolution (which was, however, very different in character and results from most) has not been followed by their disappearance. One of the first acts of the "Assemblée Con-

stituante" of France in 1791 was the abolition of "all duties levied upon the entrance of goods into cities, towns, and villages. But the abolition of the tax did not diminish the need of revenue, and only six years after we find them being gradually reintroduced in Paris for the declared object of the relief of the distressed poor, under the less offensive name of *taxe de bienfaisance*. Other large cities of the republic driven by want of money soon followed the example of the capital, and in the year 1800 the octroi duties were practically re-established in France:—*Il sera établi des octrois municipaux et de bienfaisance sur les objets de consommation locale dans les villes dont les hospices civils n'ont pas de revenus suffisants pour leurs besoins*.

Upon their reintroduction, however, the communes had little or no power over their disposition, and under the First Empire the supervision and control of the central authorities over these sources of municipal revenue was steadily increased, until in 1812 their collection and administration was placed entirely in the hands of the Government. Liberty in respect to these chief sources of their revenue was restored to the communes at the restoration by the law of April 28th, 1816, which still forms the basis of the octroi legislation of France.

The history of popular revolution in Spain shows also the extreme dislike of the people to this form of indirect taxation. The "consumos," or octroi duties, were entirely suppressed by one of the first decrees of the Provisional Government which succeeded the expulsion of Queen Isabella; and I would call attention to the fact that the tax substituted for the octroi, and by which it was intended the revenue derived from octroi duties should be replaced, was a capitation tax, and that it was progressive.

But this direct tax encountered too strong an opposition, and was never in fact put thoroughly in force throughout the country. Many of the cities were compelled through sheer emptiness of purse to reimpose the "consumos," and in 1870 we see them re-established in Spain.

In Belgium, again, the beginning of the agitation against the octroi duties dates from the revolutionary period of 1847-8, and the popular movement for their extinction did not cease till their suppression in 1860. Their place has been taken, and the communal burdens are borne by a proportion of the excise duties upon wine, spirits, vinegar, and sugar, and by a tax upon the entry of coffee.

In Holland the octroi duties were wholly abolished in 1866, and the communal revenue they produced was replaced by a number of centimes added to the land tax and some other forms of direct taxation, and by a tax that in most countries where it has been levied has proved equally unpopular—the "milling tax," or tax on the grinding of corn. In Denmark there are no duties levied of an octroi character, nor, so far as I can learn, is this form of contribution practised in Russia. The different systems of municipal taxation pursued in the Empire of Germany are far too complex and varied in character for me to pretend to give any description

of them here. We are told that "the different German state have preserved their autonomy in all that concerns municipal administration and finance," and that whilst in some the octroi contributions are still those that existed in the 18th century, in others they have entirely given place to other more direct forms of modern taxation.

Thus, in Bavaria, the aristocracy (Dourghlaut and Erghlaut) still retain their ancient privilege of introducing into the towns where they reside all articles of consumption required by them and their retainers free of any octroi duty, although these duties may be imposed on the rest of the inhabitants, and it appears that this relic of the feudal ages is only gradually disappearing by private agreements and arrangements with the municipal authorities. In the Grand Duchy of Baden octroi duties are only levied in a few of the cities, and these are of the lightest character, and are limited in number. In the Grand Duchy of Hesse, also, these contributions are only imposed in a few of the larger cities. In Wurtemberg municipal treasuries are nourished by direct taxes, but in the Grand Duchy of Saxe-Weimar octroi dues are levied in the majority of the towns. It is noteworthy that in Prussia the municipal contributions differ in character in the towns and in the rural communes, for whilst in the latter they consist wholly of direct taxes, the towns are permitted, in the case of insufficiency of revenue, to levy indirect octroi duties. But these in every case, and however small the proposed tax may be, must be approved of first by the central government. It should not pass unnoticed that octroi duties have been wholly suppressed in Berlin.

"Costume and Habits of Sicilian Peasantry."

The "FOREIGN OFFICE REPORT, No. 813, Annual Series," contains the following details:—The clothing of the Sicilian peasant differs in different parts of the island. In the southern part of the island, near Sciacca, the costumes approach in appearance the Spanish style, the women wearing the black mantilla, and being mostly dressed in black. In the towns of Monte San Giuliano, the ancient Eryx, 2,464 feet in height, the men wear a woollen cappa or hood to protect them against the frequent mists in winter, and the cappa is found in many other parts; the women too wear long black veils. The ancient national costumes of the Sicilian men were very handsome. How far they may ever have been dressed in the variegated costumes, such as are seen on the boards of the opera, and resembling those still seen in the neighbourhood of Naples, it is impossible to say; no trace of such is now to be seen except in the case of the "balie" or nurses of good families. There was, however, commonly worn a very fine dress consisting, for the better classes of contadini, of a short jacket of velvet or velveteen, with a waistcoat and knee breeches to match, and a black tasselled cap, with a red kerchief round the neck and high boots; for the lower classes the dress was much the same in style, only made of home-

made black fustian, and the legs were swathed in wraps of the same material, cross-gathered with leathern thongs secured round close to the feet, which were shod with a kind of mocassin, something like a Dalmatian "opanka." This, with an underclothing of coarse linen secured at the neck by a tape and appearing at the knees beneath the breeches, with a blue or brown Phrygian cap, formed a picturesque dress. Some costumes of this kind are still to be seen, but the increased expense of living has for the masses almost driven out the old style of dress. The Sicilian peasant cannot now afford to sacrifice to the picturesque, and gets his dress of the cheapest possible fustian or other material. The clothes in which the Sicilian labourers do their daily work are things of shreds and patches, patched so often that not a vestige of the original garment remains. Such as they are now, they consist of a short jacket and trousers of coarse brown linen or fustian, with leggings swathed up with cross bands and mocassins on their feet, which they make themselves, and they generally have a short dark blue cloak which they slip over their heads in cold and rainy weather. Some of the more well-to-do peasants have winter clothes of the same shape in cloth, with lighter white cotton clothing for the summer. A thick coarse suit for winter costs sixty lire, and the lighter winter suit twenty lire. In the mountains the goat and swine herds often have besides a pair of trousers made of the undressed skin of a black sheep, with a vest made of the same material with the wool turned inward, which gives them somewhat the appearance of the ancient god Pan or of Robinson Crusoe. The house of the labourer, if he is a "giornaliere" or day labourer (in which case he gets no work in rainy weather), is usually in the towns, and consists generally of one wretched room, either paved with rough stones or not paved at all, with the scantiest supply of furniture, such as a bed, often of home-make, composed of boughs of trees twisted together cleverly with twigs and osiers, coarse settees of similar manufacture, a dirty chair, a rough-hewn table, and a pot or pan or two and a wooden trencher. In this room the whole family live, and share it with their poultry, pigs, and donkeys, if they happen to have any. Although the place is filthily dirty, the bed linen is generally clean. There is no fireplace and no latrine, nor any attempt at sanitary convenience, the street or road in front of the house being most frequently used for this purpose. The rent runs generally from twenty-five lire to fifty lire per annum. There is no ceiling; the tiled roof is over their heads, through which the smoke escapes, if they make a fire, between stones in a corner or the middle of the hut, and through which the wind rushes from every point of the compass. In the winter they suffer much from cold, which is very severe in the mountains, and when they can afford it they hang a strip of matting over the bed to give some shelter. Should they make a fire, where wood is cheap, the whole family will sometimes sleep round it on the ground. The evils, however, of their wretched habitations are, it must be remembered, in some

degree mitigated by the fact that both in town and country the greater part of the lives of the people are passed outside the houses. There is, however, a better class of *contadini*, called "massai," who live on the estates of large landowners, and these fare somewhat better both in clothing and dwelling houses, and are permanently employed. There is also another class of *contadini*, who have permanent employment on the rare farm-houses. These farmhouses, even when they do exist, are of a rough-and-ready sort, which a comfortable English peasant would regard with amazement. The Sicilian tenant-farmer has one room for himself, in which he keeps his store of provision. He has another room, called a "panetteria," for his men, and in this they either sleep at night in rough trestle beds or on the floor. In this apartment there is an oven for making bread, and a small storeroom for corn, and there may be an ox-stall, and perhaps a stable, and the farmhouse is complete. From the preceding data, as to the wretched wages, scanty food, and miserable dwellings of the agricultural labourers, it might be imagined that they did not rank very high in the scale of civilisation; nevertheless, in habits, morals, and religion, and in manners, they are far superior to what might be expected. How they manage to exist and bring up families on their poor earnings is a marvel, and they would not do this unless they were as abstemious as anchorites, very laborious, and wonderfully prudent, and their manners, moreover, are generally courteous and obliging; and, so far as his knowledge of religion goes, the Sicilian peasant is very devout. As in respect to other matters relating to the peasant of which we have spoken, there is a good deal of difference in the character, habits, &c., of Sicilian labourers in different provinces. The labourers who stand lowest in the scale are those engaged in sulphur mining, of which fact I made mention in my sulphur report of 1888, and lately some frightful details have been published of the degree of barbarism to which these workers are reduced. Generally it is supposed that the inhabitants of the east side of the island have more of the Greek blood in them than those of the west; they have, at all events, the air of being of a superior race. In Palermo and its district more of the Arab blood is supposed to prevail; in some interior districts the Lombard race has survived both in dialect and appearance; and Albanian colonies still exist in the neighbourhood of Palermo, especially at Piano dei Greci, where the inhabitants still adhere to Greek costumes and Greek usages.

From the days of the primeval Siculi and Phœnicians, it may be said there has been no dominant nation which has not supplied some ingredient towards the formation of the Sicilian people. One striking proof of the difference of character of the islanders is that on the east side of the island people rarely go armed, while in most districts on the west side and in central Sicily it is the universal custom, since brigandage (now supposed to be extinct) was always more prevalent in these parts; and though the

Sicilians are very wrath at any suggestion that it is not extinct, still people generally, and especially the authorities in the western and central districts, take as much precaution as if it were still alive, and certainly sequestrations and acts of violence are occasionally committed, as to which one must make a nice distinction not to call them by the old name. In order to understand Sicilian country life, one must dismiss from one's mind all notions of country life such as we know it in England, in France, or in any country in the north of Europe. There are no country houses, even for the proprietors, in our sense of the term. If a landowner visits his estate, he does so for a few days in the spring and autumn, and puts up as he can in some farm building fitted up for a fugitive residence. The gentry have no country sports; there is no hunting, no fishing, no game worth mentioning; there is nothing in our way of a country town, and not even any market towns, although irregular fairs are held at various towns in the interior. In the same way the peasant farmer and the peasant does not regard the country as his place of habitation; they all live in towns, sometimes many miles from their farms and places of work. If their habitations in the town are near enough to their places of work, they go forth from their towns in the morning and return there in the evening. If the lands to be cultivated are too far off for this, they put up a "pagliaja," a sort of straw wigwam, somewhere in the fields, and go forth every Monday morning, and take a nightly shake down in them until the ensuing Saturday. Every Monday morning there is a general exodus from the towns. These towns often look picturesque in the distance, being generally perched on the tops of mountains, some of them rising from 2,000 to 3,000 feet; sometimes they are perched on peaks of mountains so lofty and precipitous that one marvels how it could possibly enter into a human head to found a town in such a situation unless, as was no doubt the case, the towns were regarded as places of refuge from pirates, hostile bands, and marauders. The town of Pollina, for example, which is close on the sea on the north coast, is perched on the top of a mountain as conical and precipitous as a sugarloaf, and is about 2,000 feet high. The town of Sciafani looks like a vulture's nest on the top of a mountain of about the same height. The town of Castro Giovanni (Kasr Enna) close to the once flowery plain of Enna, is about 2,600 feet high; the town of Troina is about 3,600 feet high; and the town of Monte San Giuliano is only a little lower than Castro Giovanni. However picturesque these towns may look at a distance, on entering them generally all illusions are dispelled, and if the traveller has been to Syria or Asia Minor he will have been prepared for a similar disillusion. The towns which look stately in the distance we find on entering them to be a collection of hovels. There are, it is true, exceptions to the general rule, and I have been surprised in a few instances to find a country town with a clean, well-paved central street; but generally the streets, if they can be called such, are hardly more

level than the mule tracks in the mountains. Some have the appearance of having been paved with rough stones at some time or other, but now the greater part of the stones have either disappeared or lie dislocated about. In one considerable town which I visited, and which had a carriageable road going by it, although the main street was broad enough for six carriages to go abreast, and about a furlong in length, no carriage would venture down it, and a sick friend was carried up the street and put into his carriage outside the town. In such towns the chemist's shop is the only shop which has the similitude of a shop. The chemist is necessarily a man of some education, and the most accessible civilised being in the place. The "farmacia," indeed, is generally the place of rendezvous of all the gossips in the town, and only finds a rival in the salon of the "barbiere," unless, indeed, as happens in the more important towns, there be a casino, when the chance may be, if you want the chemist, you have to send for him to the casino, and when he comes to make up your drug, if it be a liquid, he will probably put it in a bottle which has done duty many times over, and he will not be particular if it has three or four labels on it already. As for powders, even in Palermo they make them up in papers, which look as if they came out of a village grocer's shop, and might contain common salt, or pepper, or sugar, for they rarely label them. A small old deal table, with some scanty specimens of fruit or vegetables on it, a bottle or two of oil hanging down in one doorway, and a few specimens of rough country earthenware slung down from another doorway are all the signs of commerce and marketing which the traveller will see in the place. A castle in ruins, an abandoned convent, and a dilapidated church (the matrice), with a steeple sometimes a good deal out of the perpendicular, with sometimes a brand new "municipio"—such form the chief buildings of an ordinary Sicilian country town.

"FOREIGN OFFICE REPORT, No. 822, Annual Series," states that Hifzi Pacha has caused the ancient thermal baths of Eleftheré (Salonica) to be repaired. . . . Modern experience has confirmed the high opinion which the ancients appear, from the numerous Roman remains on the spot, to have had of the springs.

"Native Tradition about Locusts."

"FOREIGN OFFICE REPORT, No. 857, Annual Series." The natives of Mogador have curious traditions as to these locust plagues, one of which, told me by a Berber fisherman, runs as follows:—

In the interior of the Sabara are people (Jeraiduja, or locust owners) who have control over the locusts, and they used to receive presents from the Sultan, and they kept the locusts back. Every year a certain monster came to that place, and it died there; and these people used to burn the carcase, and then all was well. But if it was not burned (owing to the men not being in good humour) then it putrefied, and bred millions of maggots, and they became locusts. And lately some of these men came to the Sultan and

said: "Have not people been complaining of locusts?" And the Sultan replied that they had. "Well," said the Jeraiduja, "we are the locusts; why have you not given us our customary largesse?" Another version was that the locusts came out of a certain cave or pit in the Sahara, over which some holy people had control.

"The Hedjaz, 1890."

"FOREIGN OFFICE REPORT, No. 867, Annual Series." The number of pilgrims who landed at Jeddah during 1890 far exceeded that of the two or three preceding years. Their nationality and numbers are shown in the accompanying list:—British Indians, 11,545; Egyptians, 5,815; Moors, Algerians, &c., 3,223; Javanese, 10,004; Turks and Syrians, 4,637; Arabs, 1,700; Persians, 1,941; Yemenese, 2,381; Soudanese, 222; Bokharians, 878; Pilgrims from Yembo, 4,067; arrived by coasters, nationality unknown, 983. Total, 47,396.

"The Sacred Citron."

"FOREIGN OFFICE REPORT, No. 874, Annual Series." There is also a curious, rare, and highly-esteemed holy fruit of this genus (citron) which, as mentioned in my Commercial Report for 1883, is sold here at an average of perhaps 4d. per fruit, yet appears never to be eaten. As I said in that report, this may be spoken of as the sacred or holy citron of the Jews, which is carried to their synagogues at the Feast of Tabernacles, it having an emblematical significance. So highly prized is this fruit by the faithful observers of Israelitish tradition, that specimens without blemish sometimes fetch as much as 4s. each here; while, in England, I am informed on good authority that they are sold in certain synagogues for the extraordinary price of one guinea to two guineas each. Their use is supposed to be derived from injunctions contained in the 23rd chapter of the book of Leviticus: "And ye shall take you on the first day the boughs" (Hebrew version, "fruit") "of goodly trees, branches of palm trees, and willows of the brook." But the Jewish version of the same passage reads: "And you shall take to yourselves on the first day the fruit of the tree Hadar, palm leaves, boughs of the tree Aboth, and willows of the brook."

These special fruits, boughs, &c., are particularised in a Jewish book, entitled "The Festivals of the Lord," as fruit of the tree badar, or citron (Hebrew, "troon"), the capoth temarim or palm leaves, boughs of the tree aboth or "myrtle," and brook willows. The "troon," or "tabernacle citron," as it is sometimes called, is a fruit rather larger than a lemon, pale greenish-yellow in colour (being always plucked before it is fully ripe), and said to contain only one pip, and to be of an extremely pure nature, and to keep sound for a very long period. Those which are despatched hence are carefully packed in cotton wool or other soft material, as the price which they will realise for their holy use is entirely dependent on the greater or less freedom from blemish which the priests can certify concerning each specimen. Inquiry as to the exact

locality of their production has resulted in fixing it at a place called Assats (sometimes Assat), which is in the province of Soos, at no great distance (some say half a day, some a day) from the town of Tarndant, and on or near the bank of the great Soos River. It is related with regard to this interesting place that there is a very ancient Hebrew graveyard there, and orchards known by the names of Moses, Aaron, David, &c., also that the authority of the Moorish Government is not respected there. Jewish informants here have said that these "troons" come from no other place but Assats; but they have been unable to explain how the faithful Hebrews, in many far-distant parts of the world, manage to provide themselves with these necessary emblems. The shipment from Mogador in one year amounted to 110 boxes, containing 9,024 specimens of this interesting vegetable production.

"Locusts as Food." The same report states—No governmental or municipal measures are taken, as in Algeria and Australia, against these pests; the only in which their numbers seem to be materially reduced being the collection of large quantities for sale as food among the natives, they not appearing to be "unclean" to either Jew or Mohammedan, though prawns (to which they are compared in flavour by some Europeans who have tasted them) are not eaten. Brought into town in camel loads, heaving sackfuls of ruddy-brown or greenish-yellow insects (the first colour in Autumn, the latter recently), they appear to be first boiled in salt and water, then fried or parched. The same *modus operandi* seems to have been in vogue, according to old writers, early in the last century. When properly preserved the "jeraad" appear to have been looked upon as a convenient form of food for travellers to take with them on the road.

"Native Drugs."

"FOREIGN OFFICE REPORT, No. 888, Annual Series," contains a suggestion that it would be worth the while of a herbalist and druggist to visit and examine the sample rooms attached to the Imperial Maritime Custom-houses, in order to study the drugs in use in China.

"Population of Australia."

"COLONIAL REPORT, No. 4, Annual Series," contains a considerable amount of valuable information with regard to the population of Australia. The following is stated to be the proportions of the sexes in capitals of Australian colonies in 1881. Females per 100 males:—Hobart, 107·02; Melbourne, 103·55; Brisbane, 103·38; Wellington, 101·09; Adelaide, 100·84; Sydney, 96·80; Perth, 95·30.

The following is the order of colonies in reference to density of population, 1889:—Victoria, New Zealand, Tasmania, New South Wales, Queensland, South Australia, Western Australia.

The mean increase of population by excess of births over deaths, 1880 to 1889, is 1·65 per cent.

"Native Land Transfer on the Gold Coast."

"COLONIAL REPORTS, No. 1, Miscellaneous Series." Continuation of No. 110 (O.S.). With regard to the land question Mr. H. W. MacLeod, late Chief Justice of the Colony, in a paper published in the "Edinburgh Juridical Review" for July, 1889, on "The Administration of Justice on the Gold Coast," states:—"Throughout the greater part of the Colony succession is through the female; e.g., when a man dies his children do not succeed, but the property is taken by the children of his sister. A chief explained the reason thus: 'My sister's children are my blood relatives, but whether the children my wives bear are so or not I cannot tell.' When I told him how different the white man's law was, he gave me clearly to understand that in this respect he considered the white man somewhat credulous and soft-headed. Again, in the greater part of the colony such a thing as individual property or private ownership is unknown. Property belongs to families, larger or smaller, as the case may be, but ever-increasing in number. Each individual of the family has rights in the property and can enforce them, but he has no power of alienation. Such property is managed by the head of the family for the family benefit, and as these two doctrines of succession and family property must be applied together, the power will not appear so strange, for though when a man dies, his sister's child becomes head of the family, and succeeds as such head to the property, yet the deceased's children are members of that family, though occupying a very subordinate position."

The report also contains some important notes on Native Drugs and Plants by Dr. J. F. Easmon, Assist. Col. Surgeon.

"British New Guinea."

The Annual Report for 1890 contains a large amount of valuable information, from which the following notes are extracted. Sir William Macgregor gives the following account of the natives of the Island of Kiwai at the mouth of the Fly River (p. 40): "They possess no knowledge of pottery and have no pots; they employ as bucket, basin, bowl, and plate a large slipper shell, which they procure through Mowatta, as I am informed. Its name is 'Wadere,' and the consequence is that the Kiwai native has no other name than 'wadere' for all our pots and pans and different kinds of dishes. They use a knife or dagger of cassowary leg bone, obtained from Dudi. Water is carried in great bamboos or in cocoanut shells, arranged about half a dozen in a long narrow basket slung over the shoulder. All cooking is done by roasting on the coals, or the article to be cooked is rolled into pandanus palm or some other leaf, and roasted in that way on the fire. In this manner they cook pies, and such things as mushrooms, and the vegetables "gesere" and "guguba," mentioned above. Men, women, and children go to the gardens; if they are inland the husband goes ahead with bow and arrow, and the others

follow ; he sometimes takes a fair share in carrying in the supplies. They seem to use no arms except the bow and arrow. They have no shields, but we saw a very few short-handed, heavy stone clubs. The bow is made of a piece of bamboo nearly an inch thick, about two inches broad in the middle, and tapering to the ends ; the inner surface is on the convex side ; the string is a piece of bamboo about $\frac{1}{4}$ inch broad and half as thick. The shaft of the arrow consists of reed ; the point of palm wood or bone. They do not seem to employ poisoned arrows. They carry bundles of arrows that may sometimes be counted by the score. Some of them are very old and worm-eaten. They know betel nut, lime, and pepper, but they do not use them, just as they know of the *Piper Methysticum*, which, also, it is not customary to employ, and they do not cultivate. I have not seen a person with stained teeth on the island. I do not know of any stimulant that they possess, unless we may call by such names their home-grown tobacco, which they cultivate in considerable quantities. The women, down to the smallest little girl, wear a dress made of the different kinds of fibre, and generally coloured yellow, reddish-brown, and brownish-black. The yellow dye is procured from the root of a plant which seems to be a kind of turmeric ; the reddish colour is got from a red clay brought from Dudi, the mainland on the right bank of the river ; and the black colour is given to the fibre by burying it in mud for about a week. The dress is called "wapa." It consists of two parts, front and back. The fibre in each is about three feet long, and the two parts united by a woven belt which, in dressing, is first of all fastened on the right side. The back portion of the dress, consisting of a large handful of fibre woven into the girdle at the top and free below, is brought through tight between the legs and passed under and over the band in front ; the front portion is then simply doubled over the band to form a ruff in front. Women wear their hair short. Neither man nor woman tattoo. They do some carving on drums, &c., which they call "titi," and this therefore becomes their word for "writing." For the male sex the fashion of the country is that they be absolutely naked ; but at least half of them wear more or less clothing of some kind. Indeed, clothes and tobacco are the two things they desire above all others. These people were greatly amused at the dress worn by the Port Moresby natives of my party when got up in their national uniform of a yard and a half of pack-thread ; while, on the other hand, our otherwise nude natives were shocked at the indecency of the Kiwai people, who did not wear a string. The paper mulberry plant is not known to Kiwai, and they have no native cloth, and no name for cloth. The cloth-like part of the young cocoanut tree they call "sugu," but strange to say they have not applied that name to cloth, and consequently they are in great difficulties sometimes for want of an adequate expression. For dances men paint themselves in red, black, and white. The black is from the charcoal of a corklike plant, all pith, called "paramuti uibu" ; the red clay is from Dudi, and the white is a clay from Mavataserao, or the burnt shell of the

small clam called Ipa. They wear long petticoats made of the same materials as the women's wapas, and elaborate feather headdresses, which cannot be described here. Besides the paints already mentioned as used in ornamenting the body, it should be mentioned that the septum of the nose is pierced in both sexes. The women wear in the septum a short piece of bamboo which hardly at all projects at the sides, about three-fifths of an inch in diameter, so that it gives a square appearance to the point of the nose, and makes all the women very much resemble each other in feature. Men sometimes wear a piece of clam or pearl shell in the septum, but generally they wear nothing in it. The lobes of the ears seem to be distended in early life until they burst, and then a long flap, about half an inch broad and perhaps four or five inches long, is left, and is worn turned up behind the ear so as to project in front. A row of small holes is pierced round the margin of the external ear, in which they insert small quantities of worsted or coloured fibre. They do not seem to practise any other form of mutilation except that a few have scars on the back. Circumcision is unknown. The most prized decoration is the polished end of a conical shell; some of these are about three inches in diameter and are worn suspended from the neck. Good specimens they will not sell at any price. Some have belts thickly and neatly inlaid with a double row of small white cowry shells; others wear belts and bands thickly studded with dog's teeth. They often wear shell armlets, and also armlets and leg ornaments plaited from pandanus and other leaves. A kind of mint is the only scented plant in use; this they wear behind their ear or stuck into their armlets. They have few flowers, the most conspicuous being the double red hibiscus, which they call "the flower"; they have a very considerable variety of crotons and dracenas, which they cultivate largely for ornamentation at dances. They are very fond of the feathers of the cassowary, birds of paradise, cranes, and black and white cockatoos, from which they construct quaint head-dresses. . . . It is not easy to procure any insight into the ideas of such people with regard to another world than ours, but this much they told me at Kiwai:—Every man, woman, and the smallest children, every dog, every pig, every crocodile, has a soul or spirit (Urio) which does not die. It leaves the body during sleep, and leaves it perhaps permanently, or it may be only at night, after death and burial. These spirits wander about at night, and there are many people here who tell me that they have seen them. After the decease of the body all the Urio are evil spirits, and all their doings are only malicious.

"Internationales Archiv für Ethnographie." (Trap, Leiden; Kegan Paul, Trench, Trübner & Co., London). It is probable that many members of the Anthropological Institute are not acquainted with the "Internationales Archiv für Ethnographie," which is now in its fourth year of publication. This notice is written in the hope that it will lead to the greater publicity and increased sale in Britain of this valuable journal.

Anthropologists have to thank the public-spirited publisher, Herr P. W. M. Trap of Leiden, for continuing to produce the journal at a personal loss. The Archiv is ably edited by Herr J. D. E. Schmeltz, Curator of the National Ethnographical Museum of Leiden, assisted by an international committee consisting of such well-known names as Dr. K. Bahnson, Copenhagen; Dr. F. Boas, Worcester, U.S.A.; Dr. G. J. Dozy, Noordwijk; Prof. H. H. Giglioli, Florence; Dr. E. T. Hamy, Paris; Prof. Dr. H. Kern, Leiden; Prof. Dr. E. Petri, Petersburg; Prof. Dr. G. Schlegel, Leiden; Dr. Hjalmar Stolpe, Stockholm; Dr. E. B. Tylor, Oxford.

Each volume, which consists of six serial parts, 4to, averages about 250 pages and 20 plates, mostly coloured, besides numerous woodcuts. The first two parts of the current volume, for example, contain 104 pages and 10 plates, of which seven are coloured. Each separate issue consists of (1) Original Communications; (2) News and Correspondence; (3) Questions and Answers; (4) Museums and Collections; (5) Bibliographical Review; (6) Reviews of Books and Papers; (7) Explorations and Explorers, Appointments, Necrology. The articles and notes are written in Dutch, German, French or English; the valuable bibliographical summary by Dr. Dozy is always in French. There are very few original communications in English, and the majority of these are written by Prof. Giglioli.

The "get up" of the Archiv is exceptionally good, and the illustrations are particularly excellent, the plates being drawn with accuracy and with artistic feeling.

The last volume contained a considerable proportion of papers dealing with American ethnology, the current volume "will probably contain articles of a more general character." As is to be expected, the Archiv deals more particularly with ethnographical specimens, but the editor is willing to make it quite representative in character. He also wishes to obtain the active co-operation of more English authors, being anxious to render the Archiv as truly international as possible. [A. C. H.]

"The American Antiquarian," vol. xiii, No. 2, contains a paper on "Some principles of evidence relating to the Antiquity of Man," by W. J. McGee. "The Alaskan natives of Fort Wrangel," by Egbert Guernsey, M.D. "The Story of Skaga Belus," by James Deans. "Although only a legend, it contains historical data enough to shed a gleam of light on the long-forgotten migration of the early inhabitants of North-western America." Mr. S. D. Peet contributes an important paper (illustrated) on "Altar Mounds and Ash Pits," describing more especially those in Southern Ohio.

"A Journal of American Ethnology and Archæology."
 Edited by J. W. Fewkes. Vol. i, 4to. (Houghton, Mifflin & Co., Boston.) The whole volume (pp. 132) is taken up with a paper

entitled, "A few summer ceremonials at Zūni Pueblo," New Mexico. The work is well illustrated, and contains much valuable information. The ruins in the Zūni reservation are carefully described.

"**The American Anthropologist**," vol. iv, No. 2, contains "The story of a Mound; or, the Shawnees in Pre-Columbian times," by Prof. Cyrus Thomas. (Illustrated.)

The author states that "it is not a single mound but a group of ancient works, consisting of several tumuli, a canal or large ditch, and two or three extensive excavations. This group, which is one of the most important and interesting in the Southern States, is located upon the right bank of the Etowah river, a few miles south of Cartersville, in Bartow County, Georgia." A full description of the thin copper plates ornamented with stamped figures is given.

"The Thruston Tablet," by W. H. Holmes (plate). "This slab was found on or near the surface of the ground on Rocky Creek, in Sumner County, Tennessee." . . . The delineations consist principally of human figures placed in a variety of attitudes, and comprise three or four groups more or less independent of each other.

"On Zemes from Santo Domingo," by J. Walter Fewkes (plates). The author considers them as the productions of the Caribs, but is not sure that another people may not have had a hand in their manufacture.

"Notes on some of the Laws, Customs, and Superstitions of Korea," by W. Woodville Rockhill.

"**Transactions of the Canadian Institute**," vol. i, part 2. The Rev. Father A. G. Morice, O.M.I., contributes a paper on "The Déné Languages," and recapitulates as follows:—(1.) The Déné languages agree with most American idioms through the polysynthetism which prevades all their composite words, and more especially their verbs. (2.) They also resemble the Turanian tongues on account of the monosyllabism of most of their roots, their confounding and agglutinative processes of word-building, the formation of their plural and of their amplificative and diminutive, their law of euphonic sequence of the vowels, their innumerable differentiating distinctions, the fundamental rule of their syntax, which requires that the governed word precede the governing, the postpositive character of their equivalents for our prepositions, the scarcity of their terms expressive of relation or conjunction, &c. (3.) We must likewise note the following features which they possess in common with the Semitic languages, the immutableness of their initial consonants as contrasted with their vowels, which are essentially transmutable through the various dialects, the nature of their affix article, the number of the modificative forms of their verbs, and the grammatical duality of such objects as are naturally twofold. (4.) Lastly, the pronominal

inflections of their verbs, their mode of forming the number "Nine," as well as the character of all the interrogative and of some possessive pronouns, in as many traits of affinity with the Aryan languages. Attention is also called to other important details.

"The Proceedings of the Royal Geographical Society," May, 1891, contains a description of an offering by a chief named Mlolo, residing on the southern frontier of Nyassa land, to the spirits of his ancestor, by John Buchanan, H.M. Acting Consul; also a description of the ruins in the Sundurban, by J. R. Rainey.

June, 1891, Mr. Charles Chewings gives details with regard to the expedition fitted out by Sir Thomas Elder, G.C.M.G., for the exploration of Central Australia.

"The Quarterly Journal of the Geological Society," May, 1891, contains a paper by Professor J. Prestwich, F.R.S., on the age, formation, and drift stages of the valley of the Darent; with remarks on the palæolithic implements of the district, and on the origin of its chalk escarpment.

"The Journal of the Society of Arts," No. 2,010, contains an article on "Armenia and its people," by Captain J. Buchan Telfer, R.N.

"Nature," March 5th, contains an exhaustive review of "The Darwinian Theory of the Origin of Species," by F. P. Pascoe, referred to in the last number of the Journal.

A letter from Darwin to the Duke of Argyll on the Unity of the Human Race.

A table of the Aino population in Yezo from 1872 to 1888.

March 19th.

A short note is given on Eskimo Art Work.

April 2nd contains a review of "Outlines of Mental Psychology" by G. Trumbull Ladd. Also "The Principles of Psychology" by William James.

April 9th contains a review of "On the Modification of Organisms," by David Syme.

"The Journal of the Royal Society of Antiquaries of Ireland," vol. i, No. 5 (5th series) has "A Contribution to Irish Anthropology," by W. Frazer, in which the measurements of a selection from 50 crania belonging to the 8th century, found at Donnybrook, are given.

"The Proceedings of the Society of Antiquaries of Scotland," vol. xii (N.S.) "Notes on a Finnish boat preserved in Edinburgh," by David Macritchie, F.S.A.Scot. "Examples of the survival in Scotland of superstitions relating to fire," by Rev. Alexander Stewart, LL.D.

"Notes (illustrated) of a collection of arrow and spear-heads, &c., from Alabama, United States recently presented to the

Museum," by G. F. Black. "Notes on the further excavations of Howmæ, 1889," by John Trail, F.S.A.Scot. (plates).

"**The Journal of the Ceylon Branch of the Royal Asiatic Society**," vol. x, No. 37, contains an article on the ancient industries of Ceylon, by Mr. George Wall.

"**The Journal of the Anthropological Society of Bombay**," vol. ii, part 2, contains a paper (with plate) on "The mouth lock vow," by Mr. F. Fawcett. The mouth lock is described as an instrument fashioned like a large safety pin, usually made of silver, and worn with the pin stuck through both cheeks between the teeth so as to keep the mouth open, and offered at a shrine in performance of a vow for some received benefit. Some thousands of these mouth locks, worn by devotees from all parts of India, but chiefly from about Mysore, the Cedia districts, and Hyderabad are given up at Tirupati, where so many Hindoos have their fair in the north-west district of the Madras Presidency.

No. 3 contains an important presidential address by Mr. Denzil Ibbetson, on the study of Anthropology in India. Also a paper by the Rev. A. W. Painter on the Hill Arrians living along the slopes of the Western Ghats in Travancore. A paper "On a few superstitions common to Europe and India," by Mr. Jivanji Jamshedji Modi.

No. 4 contains an account of "The Marathi Ballad, written on the Suttie of Ramabai, widow of Madhavras Peshwa," by Mr. H. A. Acworth (with plate). "Notes on the vernacular language of the Koukan," by Dr. J. Gerson da Cunha. "On the Household and Village Gods of the Maharashtra," by Mr. P. B. Joshi. "A note on the Pithora Worship among the Hindoos," by Dr. W. Dymock. "Note on a form of fire worship amongst the ancient Arabs," by Dr. W. Dymock.

"**Transactions of the Asiatic Society of Japan**," vol. xviii, part 2, "On race struggles in Corea," by E. H. Parker. This paper consists of two parts. The first part is a translation of the chapter in the Early Han Shu, which treats of Chao-sien. The Han Shu was written during the first century A.D., and treats here of the period B.C. 200 to about A.D. 1. The general results are these:—The Chinese have overrun Corea twice, once in the second century B.C., and once in the seventh century A.D. In both cases their direct rule was short, and their vice-regal rule never extended beyond the northern half of Corea, or for any time ever beyond the mountain range which divides the north part into east and west portions. The Japanese never set foot at all in that part of Corea just mentioned subject to immediate Chinese influence, except for a few months, during Hideyoshi's invasion, towards the end of the 16th century. The Japanese never ruled directly any part of Corea, but there is reason to believe that some of the Japanese race were still to be found indigenous in the extreme south of Corea as late as the early centuries of our

era. They never exercised any permanent influence upon the south-east part, but they were undoubtedly influential in the south-west part up to the second Chinese invasion, after which their influence, except as pirates, ceased, until Hideyoshi conceived the idea of attacking China through Corea."

"Modern Japanese Legal Institutions." By R. Masujima. The author states: "The history of Japan for the last 20 years has consisted of first, the destruction of the old; next, the wholesale adoption of foreign institutions, and lastly reactionary attempts to undo the work done. . . . The total result has not been satisfactory, and we are now beginning to suffer from it."

"Records of the Australian Museum." Vol. i, No. 1. Sydney, March, 1890. The publication is to take the form of an occasional periodical, to contain the results of original researches by the Staff. The following appears under the head of Ethnology:—"Mr. C. H. Roberts informs me that the neighbourhood of the Sassafras was at one time a great refuge ground for those aborigines who had offended against their own unwritten laws, especially those referring to the connubial state. The main offence was that of lubra stealing. Great enmity then existing between the Braidwood blacks and their neighbours, the Maneroo tribe. One of their customs appears to have been this:—Should the offending party be caught by the pursuing tribe, when travelling in company with the kidnapped gin, the guilty pair were simply brought back to their place of departure, and the male was then forced to undergo the ordeal of spear throwing. This consisted in having one hundred spears cast at him, when stationary, by five men, as fast as possible, when the dexterity displayed by the culprit in avoiding them is said to have been marvellous. Should the man succeed in escaping without fatal injury, the matter was considered as settled, honour satisfied, and the woman was allowed to remain with him as his wife. On the other hand, should the runaways be found cohabitating at the haven of refuge, dire vengeance was at once administered, the man killed, and his body disposed of in the manner we found the object of our search at the Sassafras. Mr. Roberts states that from some superstitious custom the legs were severed at the knee; but in this particular case it had not been done. Instead, the femora had been cleanly divided high up on the body of the bones, and then the legs doubled up on the trunk, following a post-mortem method of preparation customary with several tribes of the aborigines. The right femur, however, had been divided by a direct oblique clean cut, about the commencement of the body, and the left tibia had been smashed by a direct heavy blow with a blunt instrument just above the lower end of the body of the bone; and the injury presents the appearance of having been done previous to death."

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THE JOURNAL
OF THE
ANTHROPOLOGICAL INSTITUTE
OF
GREAT BRITAIN AND IRELAND.

APRIL 14TH, 1891.

EDWARD B. TYLOR, Esq., D.C.L., F.R.S., *President, in the Chair*

The Minutes of the last meeting were read and signed.

The following elections were announced :—

Rev. EDWARD PEEK, M.A., of Lyme Regis.

Dr. GRENFELL BAKER, of 70, Cambridge Gardens, North Kensington.

The following presents were announced, and thanks voted to the respective donors :—

FOR THE LIBRARY.

From the GOVERNMENT OF NEW ZEALAND.—Report on the Statistics of New Zealand, 1889. 8vo. Wellington, 1891. Map and Tables.

From CUTHBERT E. PEEK, Esq.—Index Geographicus. 8vo. London, 1886.

— Exploratory Survey of Part of the Lewes, Tat-on-duc, Porcupine, Bell, Trout, Peel, and Mackenzie Rivers. By William Ogilvie, D.L.S. 8vo. Ottawa, 1890.

— Black's General Atlas of the World. Fol. Edinburgh, 1890. 64 Maps and Frontispiece.

- From the PUBLISHERS.—Races and Peoples. By Daniel G. Brinton. 8vo. New York, 1890. (Kegan Paul, Trench, Trübner and Co.) Woodcuts.
- Three Years in Western China. By Alexander Hosie, M.A. 8vo. London, 1890. (G. Philip and Son.) Plates and Map.
- The Darwinian Theory of the Origin of Species. By Francis P. Pascoe, F.L.S. 8vo. London, 1890. (Gurney and Jackson.)
- The Intercranial Circulation. By James Cappie, M.D. 8vo. Edinburgh, 1890. (Jas. Thin.) Plates.
- From the AUTHOR.—Di Alcune Correlazioni di Sviluppo fra la Statura Umana e l'Altezza del Corpo Seduto. Studio di Antropometria del Dott. Professor Paolo Riccardi. 4to. Modena, 1891.
- The Vikings in Western Christendom. A.D. 789–888. By C. F. Keary, M.A., F.S.A. 8vo. London, 1891. Map.
- An Analysis of the Motor Symptoms and Conditions of the Ocular Apparatus, as observed in Imbecility, Epilepsy, &c. By Charles A. Oliver, M.D. 8vo. 1890.
- The Peabody Museum. By F. W. Putnam. 8vo. 1890.
- The American Race. By Daniel G. Brinton, A.M., M.D. 8vo. New York, 1891.
- Vocabularies from the Musquito Coast. By Daniel G. Brinton, M.D. 8vo.
- From the ÉCOLE D'ANTHROPOLOGIE (Paris).—Revue mensuelle, 1891. Nos. 1, 2, 3.
- From the GEOLOGICAL SURVEY OF NEW SOUTH WALES. Records. Vol. ii. Part 2. Memoirs, Palæontology. Nos. 7, 8.
- From the GOVERNMENT OF PERAK.—The Perak Government Gazette. Vol. iv. No. 5.
- From the KONGL. VITTERHETS HISTORIE OCH ANTIQVITETS AKADEMIEN.—Antiqvarisk Tidskrift för Sverige. Del. xi, 3; Del. xii, 1–2.
- From the ESSEX FIELD CLUB.—The Essex Naturalist. Vol. iv. Nos. 10–12.
- From the EDITOR.—L'Anomalo. Anno iii. Nos. 2, 3.
- Journal of Mental Science. New Series. No. 121.
- Nature. Nos. 1115–1119.
- Revue Scientifique. Tome xlvii. Nos. 11–15.
- Revista Argentina de Historia Natural. Tomo i. Entrega 1.
- Science. Nos. 422–425.
- From the ROYAL ARCHEOLOGICAL INSTITUTE.—The Archæological Journal. No. 188.
- From the ROYAL UNITED SERVICE INSTITUTION.—Journal. No. 158.
- From the ROYAL INSTITUTION OF CORNWALL.—Journal. Vol. x. Part 2.
- From the SMITHSONIAN INSTITUTION.—Report, 1888.
- From the MUSEUM OF AMERICAN ARCHEOLOGY (Philadelphia).—Annual Report of the Curator. Vol. i. No. 1.

- From the PEABODY MUSEUM.—Palæolithic Man in Eastern and Central North America. Part 3.
- From the UNITED STATES NATIONAL MUSEUM.—Report, 1888.
- From the ANTHROPOLOGISCHE GESELLSCHAFT IN WIEN.—Mittheilungen. Band xxi. Heft 1. General-Register zu den Bänden xi–xx. (1881–90.)
- From the ANTHROPOLOGICAL SOCIETY OF WASHINGTON.—The American Anthropologist. Vol. iv. No. 1.
- From the BATAVIAASCH GENOOTSCHAP VAN KUNSTEN EN WETENSCHAPPEN.—Notulen. Deel xxvii, 1, 2; Deel xxviii, 1, 2; Tijdschrift voor indische Taal, Land en Volkenkunde. Deel xxxiii, Afl. 5 e 6. Deel xxxiv, 1, 2; Nederlandsch-indische Plakaatboek, 1602–1811; vii, (1755–1764).
- From the BERLINER GESELLSCHAFT FÜR ANTHROPOLOGIE, ETHNOLOGIE UND URGESCHICHTE.—Zeitschrift für Ethnologie, 1890. Heft 6; 1891, Heft 1.
- From the BENGAL ASIATIC SOCIETY.—Proceedings, 1890. Nos. 9, 10.
- From the DEUTSCHE GESELLSCHAFT FÜR ANTHROPOLOGIE, ETHNOLOGIE, UND URGESCHICHTE.—Archiv für Anthropologie. Band xix, 4.
- From the FOLK-LORE SOCIETY.—Folk-Lore. Vol. ii. No. 1.
- From the ROYAL ASIATIC SOCIETY, CEYLON BRANCH.—Vol. x. No. 37.
- From the ROYAL GEOGRAPHICAL SOCIETY.—Proceedings. Vol. xiii. No. 4.
- From the ROYAL SCOTTISH GEOGRAPHICAL SOCIETY.—The Scottish Geographical Magazine. Vol. vii. Nos. 3, 4.
- From the ROYAL SOCIETY OF ANTIQUARIES OF IRELAND.—Journal of the Proceedings. Fifth Series. Vol. i. No. 4.
- From the ROYAL STATISTICAL SOCIETY.—Journal. Vol. liv. Part 1.
- From the SOCIÉTÉ ARCHÉOLOGIQUE (Agram).—Viestnik hrvatskoga Arkeologičkoga Društva. Godina xiii. Br. 2.
- From the SOCIÉTÉ DE BORDA (Dax).—Bulletin, 1890. Nos. 3, 4.
- From the SOCIETÀ ITALIANA DI ANTROPOLOGIA, ETNOLOGIA, E PSICOLOGIA COMPARATA.—Archivio per l'Antropologia e la Etnologia. Vol. xx. Fas. 3.
- From the SOCIETY OF ARTS. Journal. 1999–2003.
- From the SOCIÉTÉ D'ANTHROPOLOGIE DE LYON. Bulletin. Tome ix.
- From the SOCIETY OF ANTIQUARIES.—Archæologia. Vol. lii. Part 1.
- From the SOCIÉTÉ D'ANTHROPOLOGIE DE PARIS.—Bulletins, 1890. Parts 2, 3. Mémoires. 2^e Series. Tome iv. Fas. 2.
- From the SOCIETY OF BIBLICAL ARCHÆOLOGY.—Proceedings. Vol. xiii. Part 5.
- From the SOCIÉTÉ IMPÉRIALE DES NATURALISTES DE MOSCOU.—Bulletin, 1890. No. 3.
- From the SOCIETÀ DI SCIENZE NATURALI ED ECONOMICHE DI PALERMO. Bullettino, 1891. Nos. 1, 2. Giornale. Vol. xx.

Mr. T. G. PINCHES read a paper upon the Types of the Early Inhabitants of Mesopotamia.

Mr. CUTHBERT E. PEEK exhibited some Tablets belonging to Sir HENRY PEEK.

Dr. TYLOR, Mr. BOUVERIE PUSEY, Miss BUCKLAND, Mr. CUTHBERT E. PEEK, Mr. RANDALL PYE, Mr. BRABROOK, and Dr. GARSON joined in the discussion, and the Author replied.

Mr. F. W. RUDLER exhibited some Babylonian Tablets.

Upon the TYPES of the EARLY INHABITANTS of MESOPOTAMIA.

By T. G. PINCHES, Esq.

ABOUT five or six thousand years ago, when Nimrod, son of Cush, had "begun to be a mighty one in the earth," and Babylon, not at that time the great; Erech, the lovely city; Akkad, the renowned; and Calneh, now unknown, were among the numerous cities which, scattered along the many fertilizing canals, adorned, at this period, the plain of Shinar—a hot parched tract in summer, but pleasanter in the winter—an ancient race inhabited this tract, a race that had early learned how to remove the unfruitfulness of the parched ground by that wonderful network of canals of which the traces score the ground to this day.

The people inhabiting the country lived a most active life, which continued with many changes almost down to the Christian era. They left also numerous monuments, many of them of deep and surpassing interest. Turn whichever way we will in ancient Mesopotamia and the neighbourhood, there we find inscriptions of various kinds by the thousand, together with large numbers of sculptures, of which the value can hardly be over-estimated.

Many here present have probably heard of the remarkable discoveries of M. de Sarzec, Consul of France, some years ago at Baghdad. This gentleman, all enthusiasm for excavations, made excellent use of the opportunities which were presented to him, and carried on some most interesting excavations at a site on the banks of the Shatt al Hai, called Tell-Loh, representing the position of the ancient Lagaš, of which, perhaps, the word Loh is a corruption. This ancient city was a place of some renown from B.C. 2500–4000, and contained many very

fine statues, all bearing inscriptions, together with many smaller objects of interest, were found here. As works of art, they are fair, and some of them even remarkable; but, as a rule, the lines of the sculptures, &c., are stiff and rather clumsy, though, with regard to the statues, this may be in part due to the hardness of the stone. The appearance of the whole, however, is not by any means unpleasing. Unluckily, all the statues are, without exception, headless; but, as a compensation, two carved stone heads have been found without the bodies to which they belong. It will easily be seen that, as sculptures, these heads are a redeeming point, their excellent finish and careful manipulation making one excuse the shortcomings of the lower parts of the figures. It is greatly to be regretted that that important feature of the face, namely, the nose, is wanting in both cases. Sufficient, however, of the features remains intact to make them most valuable from an anthropological point of view.



1. From De Sarzec's "*Découvertes en Chaldée*," Plate XII, No. 1.

These two heads differ remarkably in form, and one recognizes in them at first glance two entirely distinct types—two distinct nationalities, in fact. Let us take the nobler of the two first. We have here a head with prominent cheek-bones, firm lips, and a square chin, a young-looking, dignified, self-conscious face, the face of a man not ashamed to look out, with a certain amount of pride of race into the world. The thick-brimmed

hat, of a material somewhat resembling astrachan, comes rather far down over the forehead, so that the height of the latter is not very apparent.

I have attempted a restoration of this head by comparison with a small one of white alabaster in the British Museum. My theory is that the head from Lagaš, which I have restored, is a portrait of a man of Akkadian race with an admixture of Semitic (Babylonian) blood, and I have therefore made the nose slightly curved. It will be noticed that the eyebrows meet over the nose.



2. Restoration of No. 1, drawn by T. G. Pinches.

That this was the general type of the Akkadian races can hardly be doubted, and in proof of it I would point to the figures of the deities on the cylinder-seals. One, in which we have a bearded deity with a similar thick-brimmed hat, forms a good analogy. He is slim and dignified, and as far as the smallness of the work allows one to see, the type is very similar to that of the head from Lagaš. This figure is intended for a representation of the god Nergal,¹ a deity with a decidedly Akkadian name. The female standing opposite him wearing a goat-skin robe and horned head-dress, is a divine attendant, in an attitude of adoration. Other examples show also the same

¹ The inscription reads, "Sin-lidiš, son of Ura-naid, servant (worshipper) of the god Ne-uru-gal" (Nergal).

type, but their noses are even straighter than I have made that of the head from Lagaš in my restoration. This *may* be due to careless work, but it is to be noted that the early Mesopotamian seal-engravers were quite skilled enough to make the noses curved if they had wished to do so, and as one would certainly have expected them to do, if racial distinctions were attached to it, as seems to have been the case.



3. Burial of fallen Warriors, from De Sarzec's "Découvertes," Plate III, C.

Another type¹ seems to be a variant of the last, due, probably, to a still larger admixture of Semitic blood, and in this case we have a face with a nose of truly colossal dimensions. This object is the head of a statuette in clay. The work is rough, but there is a remarkable amount of power in the face. The curve of the nose, however, cannot be regarded as excessive. The eyes were inlaid, but these are now gone. I have said that the aquiline

¹ De Sarzec's "Découvertes," Plate VI, No. 3.

nose, in this case, may be due to Semitic blood; but this is not by any means certain. It may belong to the type of the lower-class population—that from which the warriors and workmen came, as is indicated in the scene where workmen with baskets are heaping up the earth over their comrades, fallen in battle. All the figures on the bas-relief representing this have aquiline noses and retreating foreheads, like the head of the clay statuette. It is worthy of note that this retreating forehead and prominent nose is indicated by the Assyrians as the type of the Elamites (see the bas-reliefs of Assurbanipal exhibited in the Kouyunjik Gallery of the British Museum). According to Genesis x, 22, Elam was son of Shem, so that the Elamites would seem to have been also Semites; but the language spoken by them is rather against this, it not being in any way Semitic. I am therefore inclined to see in the Elamites a kindred race to the low-class Akkadian population of early Mesopotamia.



4. From De Sarzec's "Découvertes en Chaldée," Plate XII, No. 2.

The other diorite head from Tell-loh, or Lagaš, shows an entirely different type, namely, pure, or almost pure, Semitic. The face is oval, the chin and lips are prominent, but rounded, the cheekbones flat. Indeed, the photograph shows an extensive dark shadow under the eye, implying extreme flatness there. As in the case of the other head, the eye is large, and the

eyebrows meet over the nose. In order to get an idea of what the face was like when perfect, I have also attempted a



5. Restoration of No. 4, drawn by T. G. Pinches.

restoration of this, and the addition of a Semitic Babylonian or Assyrian nose has produced a thoroughly Semitic Babylonian or Assyrian face. The only thing Akkadian about it is the shaven head—an artificial peculiarity. I am nevertheless inclined to attribute the peculiar nose, which I have drawn from the Assyrian sculptures principally, to intermarriage with the Akkadian population.

Other examples show the more or less pure *Semitic* type of Babylonia, exemplified by the Semitic hero Gilgamesh or Gilga-



6. Gilgamesh and Ea-bani overcoming a Bull and a Lion, from a cylinder (date, about 2500 B.C.).

mos (his name, strange to say, is distinctly Akkadian), giving drink to a large-horned bull from a vase which is running over¹ (this dates from about 3800 B.C.), and by the representations of the same hero struggling with a bull, and Ea-banî, his satyr-like friend and counsellor, struggling with a lion—a design of which there are several variations. In all the hero is represented with a largish mouth, a broadish nose, large eyes, a long beard, and his hair falling in ringlets to his shoulders. He is apparently to be regarded as one of the better types of early Babylonia, as late, say, as the year 2000 or 1500 B.C.


As an example of the type of the Mesopotamians of a later date, we may take the numerous monuments of Assyria. It differs but slightly from that of ancient Babylonia. The repro-



7. Divine Figure and winged Bulls, from an Assyrian cylinder in the British Museum (date, about 650 B.C.).²

duction of a cylinder-seal which was shown (No. 7) may be regarded as one of the best. The cheeks are full, the face, as usual, is heavily bearded, and the hair also rather luxurious. The nose is fairly long, and is curved downwards at the tip. Judging from the representations on the sculptures, the Assyrians must have been a muscular race. Some of the examples on the cylinder-seals (two male bearded and winged figures before the sacred tree) are rather indifferent; but there is a very fair specimen, showing, or intended to show, a female (the goddess Istar standing on a lioness) and a eunuch-priest. Here, again, the smallness of the original has prevented the artist from doing so much as he would otherwise have done to produce really effective engravings of the people of the country at the time.

¹ From a cylinder-seal in the possession of M. de Clercq (see his *Catalogue Raisonné*, Plate V, No. 46).

² The inscription reads:  "Thy Prince, O light of Nebo, always going behind thee, have mercy upon me." (The last character I am unable to read.)

The goddess is, in fact, almost a caricature, though there were certainly people with this cast of features at that time—as indeed, there probably are now.



8. Istar and the Eunuch-priest, from an Assyrian cylinder in the British Museum (date, about 650 B.C.).

One of the best specimens, however, of the Assyrian type of features, is probably that presented by the head of a winged bull of Esarhaddon's time, which may be regarded as the Assyrian personification of manly beauty. The face is round and full, the beard and hair heavy, the nose not over long, curved and flattened at the tip. The eyebrows meet in the middle, and the hair falls in waves, low down on the forehead. This last, however, can hardly be taken as a racial peculiarity, because the Assyrians, especially the higher classes, wore wigs. Further illustrations of this type are the sculptures of the time of Sargon, Esarhaddon's grandfather, and of Aššur-našir-apli or Aššurnāširpal, a king who reigned about 885 B.C. The type is in all cases practically the same.

The Jews of Baghdad offer some points of resemblance to the Assyrians of the Euphrates valley, and though the sculptures do not give types of very great beauty, yet there may have been Assyrians and Babylonians in ancient times quite as beautiful as their modern Jewish representatives.

Of course the more noble of the two Mesopotamian types, the Akkadian, was destined to disappear in the course of centuries; nevertheless, it left its impress not only on the outward form of the Babylonian people, and through this, on the Assyrian, but also on the temperament of the two nations. They both exhibit all the energy of a mixed race, the Babylonians in the arts of peace, the Assyrians in those of war. They both excelled, though, also in branches which were not their respective "specialities"; for the Assyrian, though war-

like in the extreme, was often learned and extremely artistic; and the Babylonian, though a trader, could also act the brave warrior and the learned man and author.

With regard to the intellect of the two races, the Semitic Babylonians and the Akkadians, it is probable that they both possessed, in a marked degree, all the qualities of shrewd men of business, such as the many trade documents show, and this led to another peculiarity, namely, a love for legal forms, and later on, for litigation; indeed, the courts of law seem to be specially mentioned in the Akkadian inscription of King Gudea at Lagaš. The result of this was excellent, for, from the many legal decisions that have come down to us, we are enabled to recognize how just the laws of the ancient inhabitants of Mesopotamia were, and how fair the judges.

On the whole, we may class the Mesopotamians among the finest examples of the Semitic race, equal to any existing in the East in ancient times, and far superior to those still there. Their descendants, the Chaldean Christians, who exhibit the same peculiarities to this day, are of the same temperament, and under any other rule, would certainly come to the fore in anything to which they might turn their attention.

In connection with the above remarks upon the ancient inhabitants of Mesopotamia, I beg leave to call your attention to the very fine specimens of Babylonian tablets belonging to Sir Henry Peek, which Mr. Cuthbert E. Peek exhibits this evening.

I have remarked above on the love of these people for litigation, and this collection of tablets enables me to bring before you the proof that this was so. The earliest tablet in point of date (2280–2268 B.C.) shows an example of one of these interesting law records, and is probably one of the oldest, if not the oldest, that has yet been translated. It relates to a claim which two men made to a house which two others had bought. The disputants went before a judge, who pronounced judgment. He adjudged to one claimant the well of the house in question, and then an agreement was made by which a further portion of the property was given by the owner of the house to the two claimants together. Further litigation in the matter was then declared to be at an end, and the spirit or name of the sungod, the god Merodach, and the king, Zabium, was invoked.

I give here a translation of the essential part of the document:—

“Abdi-ili and Ya'zar-ilu laid claim to the house which Nûr-

Išum bought along with Milki-Bêlti, and they went before a judge, and the judge let them have his judgment, and the judge gave the well of his (Nûr-Išum's) house (called), Ê-azaga-zi of Anu, to Abdi-ili. They made the agreement in Nûr-Išum's house (called) Bit-Šamaš, and Nûr-Išum conveyed to Habdi-ili (= Abdi-ili) and Ya'zar-ilu, sons of Yadihum, $2\frac{1}{2}$ furlongs, dwelling house inclusive (?), (and) 3 cubits inclusive (?) up to the fence (?) of the boundary of (the property of) Šamaš-nûr-mātu^m and Êtel-pi-Sin, son of Abum-gibu^m. They shall not withhold the property, and they shall not litigate against each other. They have invoked the spirit of Šamaš, Merodach, and Zabium^m."

The names of fourteen witnesses follow this.

The next text is one of those most interesting documents known as case-tablets, that is, a tablet which, after it had been inscribed, had an envelope moulded round it, also inscribed with the same transaction. The envelope was then impressed with the seals (cylinders) of the contracting parties or the witnesses. In this case the seals may be seen on the top, bottom, and left-hand edges, and in the blank space to the left of the inscription, on both sides. This tablet is of the time of Samsu-iluna, king of Babylon from about 2175 to 2140 B.C. The following is a translation of the text, as far as I have been able to make it out:—

"Three acres of a field in the province of Tarbani (and) part of an acre of a field, the property of Âhati-šunu (situated) beside the field of Âmat-Šamaš, daughter of Libit-Nanâ, and beside the field of Bêl-šunu, one end (being) the river Euphrates, and the other the aqueduct. Two-thirds of a furlong and 5 *zu*, (with) the house (in) Sippara, $1\frac{1}{2}$ furlongs (with) the house (in) Tarbani, 1 ox, 1 young sheep, (and) 1 'ikuše-stone—all this property together (?), which is in the possession of Sig-Annunitum, Bêl-šunu, Bêl-bani, Îl-šu-bani, Rêmu^m, and Marduk-našer, she has sold, and they have paid the complete price. They are content from the word to the gold (that is, with regard to the contract, and with regard to the money and everything else) at no future time shall they (the buyers and the seller) have any claim against each other. They have invoked the spirit of Šamaš, Aa, Marduk, and Samsu-iluna, the king."

The names of five witnesses (one of whom, named *Dadaša*, has impressed his seal) follow this, and then comes the date—"18th day of Iyyar of the year of the conference (?) concerning (?) the temple of Bel."

For inscriptions of such antiquity—for they were written now more than 4,000 years ago—they must be regarded as of

very considerable interest, to which the language and the quaintness of the phraseology naturally add.

The other four tablets are of later date, namely, the reigns of Nabonidus (555-538 B.C.), Cyrus (538-530 B.C.), Cambyses (530-522 B.C.), and Darius (519-484 B.C.). The first records the selling, by Marduk-naṣer, a Babylonian, of 300 *gur* of fruit, to Akdu-lûmur (apparently a freedman) and Ḥaninâ, Marduk-naṣer's own female slave, and gives them permission to take also whatever else they may want from his (Marduk-naṣer's) house at Sippara, where Akdu-lûmur was to be regarded as his (Marduk-naṣer's) representative. The scribe and another act as witnesses.

The second refers to the letting of a house by Itti-Marduk-balaṭu, for eight shekels of silver, to be paid half-yearly. The hirer was to do all repairs and to pay on "the day of Bel" the tax of one shekel of silver. This is an ancient representative of the modern English lease, except that, in this case, only one tax, and not three, as is usual, is mentioned. The names of two witnesses and of the scribe are attached to the document.

The third is the sale of a slave, with her three-months-old daughter, by Iddin-Nabû, to the above-named Itti-Marduk-balaṭu, for two mana of silver. This tablet, however, is a historical document, for it states that this slave-woman and her child were "the spoil of the bow" of Iddin-Nabû, and that they were Egyptians. As is well known, Cambyses (the tablet is dated in his sixth year) made an expedition to and subjugated Egypt, so that this tablet is practically a contemporary reference to the event. After stating that Iddin-Nabû has now no further right of any kind to the slave and her child, the names of five witnesses are given. There is also a reference at the end to another transaction between the same parties.

The last tablet on my list refers to the transfer of a loan from a father to his son, or rather the repayment by the father, and the promise of the same amount to the son. The following is a free translation of this not over-easy text:—

"On the second day of the month Tisri, the loan of four mana and one-third of silver, grant of Nergal-âḫê-iddin, son of Marduk-bêl-napšâti, descendant of the priest of the sun-god, which was made to Marduk-rêmanni, son of Bêl-uballit, descendant of the treasurer, Nergal-âḫê-iddin will take away, and will give to Bêl-bullit-su, son of Marduk-rêmanni. There is no grant whatever of Nergal-âḫê-iddin unto Bêl-bullit-su, and Marduk-rêmanni, his father. Wherever this contract is shown that is the guarantee."

This text, which is in excellent preservation, has the name

of ten witnesses, including the scribe; and on the edge an impression (or part of an impression) of the cylinder-seal of Nadin-âhê, a priest or scribe, of the city of Sippara, who seems also to have acted as a witness. The text is dated in the 34th year of Darius.

The text of all these documents, with translations, notes, &c., will be found in "Inscribed Babylonian Tablets, in the possession of Sir Henry Peek, Bart.," London, 1888-1891.

DISCUSSION.

The PRESIDENT mentioned as among the many important details brought forward by Mr. Pinches the tendency both in Akkadian and Assyrian figures to represent faces with the eyebrows meeting. Such when met with in Europe are explained in popular folk-lore by the belief that the person is a vampire or witch, whose soul appears in the form of a butterfly (that is, in the joined eyebrows), ready to take flight from the body.

Mr. BOUVERIE-PUSEY asked if anything was known as to what was the religion of the Semites before they came into contact with the Akkadians.

Mr. BRABROOK remarked that the valuable collection of tablets exhibited by Sir Henry Peek formed a series of precedents in conveyancing, and exemplified the great advantage the ancients possessed, not only in the durability of the material upon which they inscribed their deed, but also in the succinctness of language which they were compelled to adopt.

Dr. GARSON said that he wished to call Mr. Pinches' attention to the possibility of the presence of Mongolian blood amongst these ancient inhabitants of Mesopotamia which he had described that evening, and to the means by which it may be recognised. In the typical Mongolian races the form of the eye—elevated at its external angle—and the enlarged fold of mucous membrane at the inner angle, were well-known characteristics. These characters are, however, soon lost when the Mongolians are crossed with other races. As an example of this he mentioned the Lapps. The chief character which can be relied on for the identification of the presence of Mongolian blood is the form of the face, which has a particularly flat appearance, with well marked malar bones flattened in front. The angle formed by the projection of the face at the level of the nasal notch with the external borders of the orbits is always 144° or more. In all other races the angle is much more acute.

An examination of the types of inhabitants of ancient Egypt, discussed at a meeting of this Institute, by Mr. R. Stuart Poole, a few years ago, showed that one of these is unmistakably Mongolian.

Mr. RANDALL H. PYE remarked that in the south of China the phrase "a one eye-browed man," *i.e.*, a man whose eyebrows met,

was proverbial as describing one with a haughty or ungovernable temper.

Mr. PINCHES said in reply that, in answer to a question as to whether, with the change of race, any change of religion was noticeable, it seemed to him that whilst the Akkadians were polytheists, the Semitic population had more monotheistic tendencies, and quoted, in support of this, some names from Sir Henry Peek's tablets where a single supreme god seemed to be referred to.

In answer to a question as to why one of two figures on the cylinder-seal exhibited on the screen was upside down, he said that this had been explained, by R. Brown, jun., as their way of representing the constellation of the twins.¹

In answer to the question, "What was the special object of cases or envelopes round tablets," Mr. Pinches replied that it was for the preservation of the record, both by protection of the writing by the envelope, and by the copy with which the latter was inscribed. This double record was most valuable, at times, on account of completion of the text, and variant readings.

With regard to the writing of the tablets, Mr. Pinches said that this was done with the rectangular corner of a square stick, and all the various kinds of wedges could be produced by a very slight movement of the wrist. The cylinder-seals, &c., were engraved by means of the drill, and by grinding.² The writing, impressions of seals, &c., were made whilst the tablet was in a soft state, and it was afterwards baked, or (as is generally the case in Babylonia) simply sun-dried.

In answer to Mr. Cuthbert E. Peek, Mr. Pinches said that it was true that there was a land called Aa, which seemed to be mentioned on tablet No. 1 of Sir Henry Peek. He hardly thought that this was the land of the moon-god, or rather goddess. [It is a mountainous tract on the borders of Kurdistan. See Fried Delitzsch, *Paradies*, p. 247.]

In answer to the President, Mr. Pinches said that he had not studied the question of the measures, but had read through the works of M. Anrès [and some of Prof. Oppert]. The most interesting analogy with modern measures was one which occurred on a tablet in the Edinburgh Museum. This text referred to an ass of five cubits high, and he judged, therefore, that the cubit in question must have been more or less equal to our foot. Mr. Pinches was inclined to regard the type with joined eyebrows as one not universal in Assyria in ancient times, though fairly common. He thought that the sculptures showed the eyebrows joined because the people considered this as handsome. With regard to the question of religion, Mr. Pinches hardly thought that Merodach could be regarded as a sun-god, notwithstanding that the last component part of the full form of the name, Amar-utug, might be regarded as the Akka-

¹ "Proceedings of the Society of Biblical Archaeology," March, 1891, p. 252.

² Mr. John Pinches, however, is of opinion that they used wheels similar to those employed to-day, in which case a lathe would have been needed for the work.—T. G. P.

dian word for "day." With reference to the language of the Akkadians, he thought that much progress had been made, and that this progress tended to confirm the comparison with the Tartar tongues, though the Rev. C. J. Ball had made a large number of comparisons with Chinese, and had found some most remarkable likenesses between the two. Mr. Pinches thought that the Akkadians had a certain claim to be considered civiliziers, though they shared the honour with the Semitic Babylonians. The wedge-writing seems to have originated with the Akkadians.

In answer to another question as to whether the eyebrows meeting over the nose indicated among the Akkadians and Assyrians a bad temper, the author said that there was no means of telling, as he did not think that that subject was treated of on the tablets. The gentleman who had asked the question had said that that was the opinion in China, but Mr. Pinches had heard that same opinion expressed much nearer home—namely in England.¹

In reply to the remark that the tablets of Sir Henry Peek exhibited, constituted a very complete series of precedents in conveyance, the author said that these were only, in reality, specimens, and that the British Museum contained a large number of other types, and included wills and lawsuits.

Referring to the remarks made about the Mongolian type of features, which was found also in Egypt, Mr. Pinches said that he had not, on any of the sculptures, noticed the oblique eyes which some Assyriologists thought they had observed, and which was particularly noticeable in the case of the sculptures from Cyprus. If there were any Mongolian blood, one would certainly expect to see this peculiarity sometimes reproduced on the numerous sculptures.²

*An ACCOUNT of a COLLECTION of ETHNOGRAPHICAL SPECIMENS
formed during VANCOUVER'S VOYAGE in the PACIFIC OCEAN,
1790-1795.*

By CHARLES H. READ, Esq., F.S.A.

[WITH PLATES X AND XI.]

[Read 10th March, 1891.]

THE specimens I have the pleasure of exhibiting this evening are selected from a much larger number recently acquired by Mr. A. W. Franks, who intends to present them to the Christy

¹ The gentleman afterwards said that he had not meant really bad temper, but rather that seriousness and pride of race which I had mentioned in the course of my paper.—T. G. P.

² This remark, however, is now no longer correct, for No. 1 on Plate XXV of the quite recently issued part of the account of M. de Sarzec's discoveries ("Découvertes en Chaldée"), a small head is figured in which an obliqueness of the eyes is certainly noticeable.—T. G. P.

Collection at the British Museum. Before adding them to the Museum series, however, he has been good enough to allow me to exhibit such as I thought of most interest at a meeting of the Institute, and the selection before you includes those which are either curious in type, or interesting for other reasons.

The collection was formed by Mr. George Goodman Hewett, who acted as a surgeon's mate on board the "Discovery," during Vancouver's voyage in search of the N.W. Passage, from December, 1790 to 1795, and from the present representatives of Mr. Hewett the collection was obtained by Mr. Franks, accompanied by the original MS. catalogue. I have also had the opportunity of seeing Mr. Hewett's copy of the account of Vancouver's voyage (3 vols., 4to, 1798), in which the former had inserted a number of notes, and as a rule, these are not complimentary to Captain Vancouver, who, from internal evidence, seems to have been a somewhat arbitrary commander. The expedition was, in fact, to have been commanded by Captain Henry Roberts, who had served under Captain Cook during his two last voyages. I had hoped to find in these notes something of interest about the natives or their doings, but they are disappointing in this respect, though Mr. Hewett was evidently fond of natural history, and made notes of anything that struck him as remarkable. The log of the "Chatham," the armed tender that accompanied the "Discovery," is preserved in the Department of MSS. of the British Museum, as well as a volume of rough notes made by Lieutenant Puget, but my examination of these resulted in no additional information.

The expedition was finally got under weigh early in 1791, the main objects being to proceed to the north-west coast of America, to receive formally from the persons in authority certain territories which the Spanish government had agreed to hand over to England, and to make surveys and explorations to complete Captain Cook's discoveries, with the hope of finding the long sought north-west communication between the Atlantic and Pacific Oceans.

The expedition proceeded round the Cape and reached the south-west coast of New Holland, where Vancouver named and surveyed King George's Sound, and found huts and recent traces of the natives, and then to the Dusky Bay of Cook, in New Zealand, and on to Tahiti, calling at Oparo, one of the Austral Group. The "Discovery" had parted company with the "Chatham" on leaving New Zealand, but they met at the appointed rendezvous at Mantavai Bay, Tahiti. The "Chatham," however, had made the discovery of the Chatham Islands—where Lieutenant Broughton landed and had some intercourse with the natives, with whom the party came to blows, and one

Chatham islander was shot. This unfortunate circumstance prevented any trade, and there is no specimen in the collection under consideration from the islands. This is the more to be regretted, as, to judge from Lieutenant Broughton's account of their canoes, dress, weapons, &c., in many respects they differed very widely from their neighbours, the Maories.

The two ships made a considerable stay at the Society Group, and became very friendly with the chiefs, and Mr. Hewett evidently obtained a considerable number of objects from the natives.

From Tahiti the expedition went next to the Sandwich Islands, where also they spent some time, and from thence due N.E. to the American coast north of California, then called New Albion, where they coasted along till they arrived at the Straits of Juan da Fuca, dividing the southern end of Vancouver's Island from the main land, and of all the straits and inlets in this immediate neighbourhood Vancouver made careful surveys, as evidenced by the excellent atlas of charts accompanying the account of his voyage.

In October, 1792, the season became too severe for such northern latitudes, and the vessels proceeded to the south, and after some stay at San Francisco and Monterey, returned to the Sandwich Islands. April, 1793, saw them again in California in the Bay of Trinidad, on their way to Nootka and the north, till October of the same year, when they returned south again, and then for the third time sailed for the Sandwich Islands, where they stayed until the spring of 1794. They then proceeded for the last time to the north-west coast, completed the survey, and proceeded homewards down the west coast of America and round Cape Horn, arriving in England in November, 1795.

The greater portion of the objects forming the collection is from North-West America, from Upper California northwards, the Hawaiian Islands, and Tahiti; the specimens from the other places visited being few and unimportant. Numerically the American section surpasses the rest, and probably the most valuable part of it is that from the Californian coast, seeing how great a change has taken place in the condition of the country since Vancouver's visit. The arrows are chiefly pointed with stone or shell, and occasionally copper, iron being rare, and the bead-work ornaments with which their baskets are decorated are of exceptional delicacy and finish. Though a large proportion of the specimens are of well-known types, the fact of their being of a well ascertained date, and that a century ago, adds very materially to their interest in a museum.

The chief object in the whole series, however, is one of the

feather covered gods from Hawaii, such as are mentioned by nearly all the earlier voyagers, and generally with the additional statement that they brought away some of them. The specimen in question is nearly three feet in height, formed, as usual, of stout basketwork with a netted covering to which the feathers are fixed, the eyes being of large pieces of pearl shell and the teeth formed of those of dogs. Having failed to discover any mention of this piece in Vancouver's account, I turned to Cook's voyage, and in the folio atlas (Plate LXVII, Fig. 4), I found one of these gods figured, so like in every detail that it is difficult to believe that it is not the same specimen. Unless, however, this god was acquired by Mr. Hewett after his return to England, it can scarcely be the same, as the edition of Cook's voyage, in which it is found, was published six years before Vancouver started. There is, of course, the possibility of the drawing by Webber (Cook's artist) having been made in the islands.

The shape of the upper part of this idol recalls the well-known helmets of Hawaii, the existence of which, in a spot so remote from European influence, except from occasional and rare voyagers, has long been a problem. I think, however, that the explanation of a European origin for these helmets has been so long taken for granted, that a more probable solution of the difficulty has not been fairly looked for. The dressing of the hair among uncivilized races is usually an elaborate operation, and whether as a means of adding to the stature or merely for decorative effect, is performed with great care and is much valued by the possessor. The Hawaiians were no exceptions to this rule, though the great diversity of their fashions rendered it difficult to recognise the prevailing one. Ellis (*"An Authentic Narrative of a Voyage performed by Captain Cook and Captain Clerke, 1782,"* ii, p. 150), alludes to this peculiarity and gives a plate of a man whose hair is dressed in a great roll passing from the back of his head to the front, where it projects over his forehead. He says: "the hair both of the head and beard is black; that of the head the men wear in the form of a helmet, that is a long frizzled ridge from the forehead to the neck, the sides being much shorter." There can be little doubt, I think, but that the form of these helmets and the fashion of wearing them arose in this way: the necessity for adding this ornamental hair-dressing to the figures of their gods would tend to conventionalize the type, when reproduced in sculpture, and it has become crystallized into the form we now see. Nor need we look far to find ornamental head-dresses reproducing decorative hair-dressing. The enormous wigs of the 17th century may well be cited, though it is

true that a hat was worn above them; but the judges and barristers of our own day do not wear a hat as well as the ceremonial wig, and they thus afford a better comparison. But to turn again to uncivilized peoples, nothing is more common in Africa (*e.g.*, Zambesia and the Upper Nile) than to find the head-dresses of the natives simulating elaborate hair-dressing, and, that the resemblance may be the more striking, they are usually well coated with grease. These examples, which could easily be multiplied, will suffice to show that the derivation of the helmet of Hawaii from hair-dressing would not be an isolated instance. In addition to this, the form of the helmet found in Hawaii is that of early classical times, and not such as would be worn by Portuguese, Spaniards, or any of the early voyagers in the Pacific. This fact alone should necessitate strong confirmatory evidence before the theory of the European origin of the Hawaiian helmet could be accepted.

Among the other Hawaiian specimens in the Vancouver collection are one or two deserving of special notice. One of these is the little calabash shown in Plate X, Fig. 6. It is one of the simplest of musical instruments, formed by cutting off the end of the calabash and piercing two holes in the sides to produce different notes. It still bears its original ticket, referring to Mr. Hewett's MS. catalogue, where it is stated to be from Hawaii. In the British Museum collection is another small calabash, prepared in exactly the same way as a musical instrument, but which is said to come from New Zealand. The ornament upon it would answer fairly well to Maori ideas, and if the evidence could be relied upon for these two localities, it would form an important confirmation of the hazy Maori traditions of the original home of their race, in addition to the many similar customs found equally in Hawaii and New Zealand. Experience in a large museum, however, teaches one to receive with the greatest caution the accounts given with specimens brought there, and any theories formed from such accounts are apt to collapse at the first attack. Such small scraps of evidence as are furnished by the specimens now in question are, however, worth noting, in the hope of future confirmation.

Another Hawaiian object which was, until now, unknown to me is called in the catalogue a "machine to rib cloth." In the collection are several cloth mallets, as well as a large ribbed block, upon which the bark was placed to be beaten with the mallets. This object is of quite a different character, and is of a light reddish wood, much like a broad paper knife with an edge at one side only. It would appear to have been used for producing a corrugated surface on the bark cloth, probably by placing the cloth while damp upon the large block above-

mentioned, and pressing the material into the grooves by means of this instrument. Pieces of cloth so ribbed are frequently found in old collections of tapa, and sample squares are to be found in the small quarto series published in 1787, entitled, "A catalogue of the different specimens of cloth collected in the three voyages of Captain Cook to the Southern Hemisphere; with a particular account of the manner of the manufacturing the same in the various islands of the South Seas; partly extracted from Mr. Anderson and Reinhold Forster's observations, and the verbal account of some of the most knowing of the navigators, with some anecdotes that happened to them among the natives. Now properly arranged and printed for Alexander Shaw, No. 379, Strand, London, 1787." Thirty-nine varieties of tapa are described in the eight pages of text.

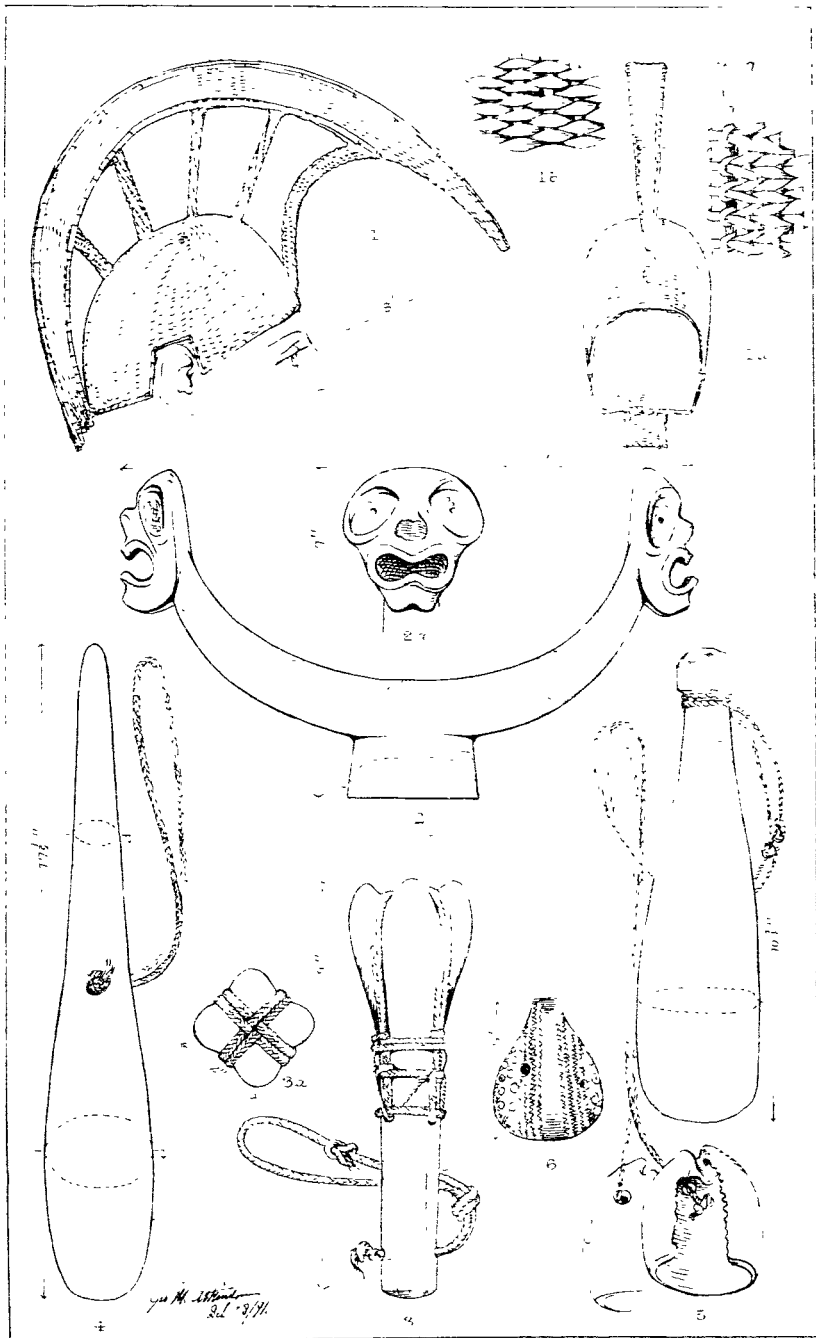
Mr. Hewett's manuscript catalogue, though scarcely more than a list, does not compare unfavourably with similar catalogues of the same period, and it adds greatly to the value of the collection. In some instances, where the original numbers have been lost from the objects, it is possible to identify them from the slight descriptions in the catalogue. In other cases, *e.g.*, bows and arrows, the catalogue is of little use unless the specimens are numbered. This is, at times, very tantalizing. Among the ancient possessions of the British Museum is a considerable series of fish hooks, undoubtedly from some of the islands of the Eastern Pacific, but without definite locality. In Mr. Hewett's collection is a similar series, but unfortunately they bear numbers referring them both to Hawaii and Tahiti, though the hooks are precisely of the same make. It is obviously within the bounds of possibility that the same pattern should be in use in both places, but if so it would have been more satisfactory to find a few words to that effect.

DESCRIPTION OF PLATES X AND XI.

The Institute is indebted to one of its members, G. M. Atkinson, Esq., for kindly drawing these two plates.

Plate X.

Fig. 1.—Helmet of plaited basketwork, fitting tightly to the head, and with an opening left at each side for the ears. It is provided with a large openwork crest supported by five radiating bars, also of basketwork, though of a different plait from the body of the helmet. Though it is possible that this specimen was once covered with feathers, no



traces of the network into which the feathers are worked, can now be seen. Figs. 1A and 1B give the front view of the helmet and details of the plaiting. A helmet of similar design to this is found on an idol covered with tapa, in the British Museum (Christy Collection). It is from the collection of the late Rev. J. G. Wood, and is figured in his "Natural History of Man." The origin of the form, and the probability of its not being derived from European design, is discussed in the text.

Fig. 2.—This object is described in the MS. catalogue of the collection as a "Sandwich Islands spear-rest," and if this be its purpose, it was probably intended for use in a canoe, where the oval base would fit tightly into a hole in the gunwale or prow. The base is so small that the object will barely stand upright. It is in the form of a crescent of hard brown wood, highly finished, nearly circular in section, and ornamented at each end with a characteristic Hawaiian head, with open mouth and large sunk eyes, now empty, but originally filled with discs of pearl shell.

Fig. 3.—Hand club, the handle of hard brown wood, the head of basalt, bound on with neatly plaited sinnet. This is a very practical weapon, of unusually perfect workmanship and uncommon form. It is no doubt of Hawaiian make, both from the shape of the stone head, and from the character of the wood forming the handle. Where the stone head joins the wood it is circular in section, and at the end it suddenly widens so as to produce a rim about $\frac{1}{16}$ inch wide; towards the other end it gradually merges into a square section, each angle being of an oviform character, and these angles project at the end, where they are used to prevent the sinnet lashing from shifting (see Fig. 3A). The end of the handle has a plaited rope passed through it, with a loop at the end for the wrist, and thus to prevent the weapon from being torn from the grasp.

Fig. 4.—A combined dagger and club, of simple but ingenious design. It is of heavy brown wood, of nearly the same section throughout, but coming to a point at one end, while the other is stout enough to serve as a club. Its double use is obtained by placing the loop of sinnet midway between the two ends, so that by transferring the hand and the loop round it from one end of the weapon to the other, it can be used at will either as a club or a dagger. This specimen is from the Hawaiian Islands and is called a "bludgeon dagger."

Fig. 5.—An instrument of palm wood for splitting bread-fruit: attached to it are two tiger cowry shells with their inner

whorls broken out, and one end cut off. From the Tahitian Islands. These bread-fruit splitters are not of rare occurrence, made of different kinds of wood and of various forms; but this is the only specimen that I have seen provided with the spoons for extracting the soft bread-fruit after the hard rind has been cracked. For this reason it has been thought desirable to give a figure of the complete apparatus. It is described in the MS. catalogue as a "Tahitian bread-fruit knife and scrapers."

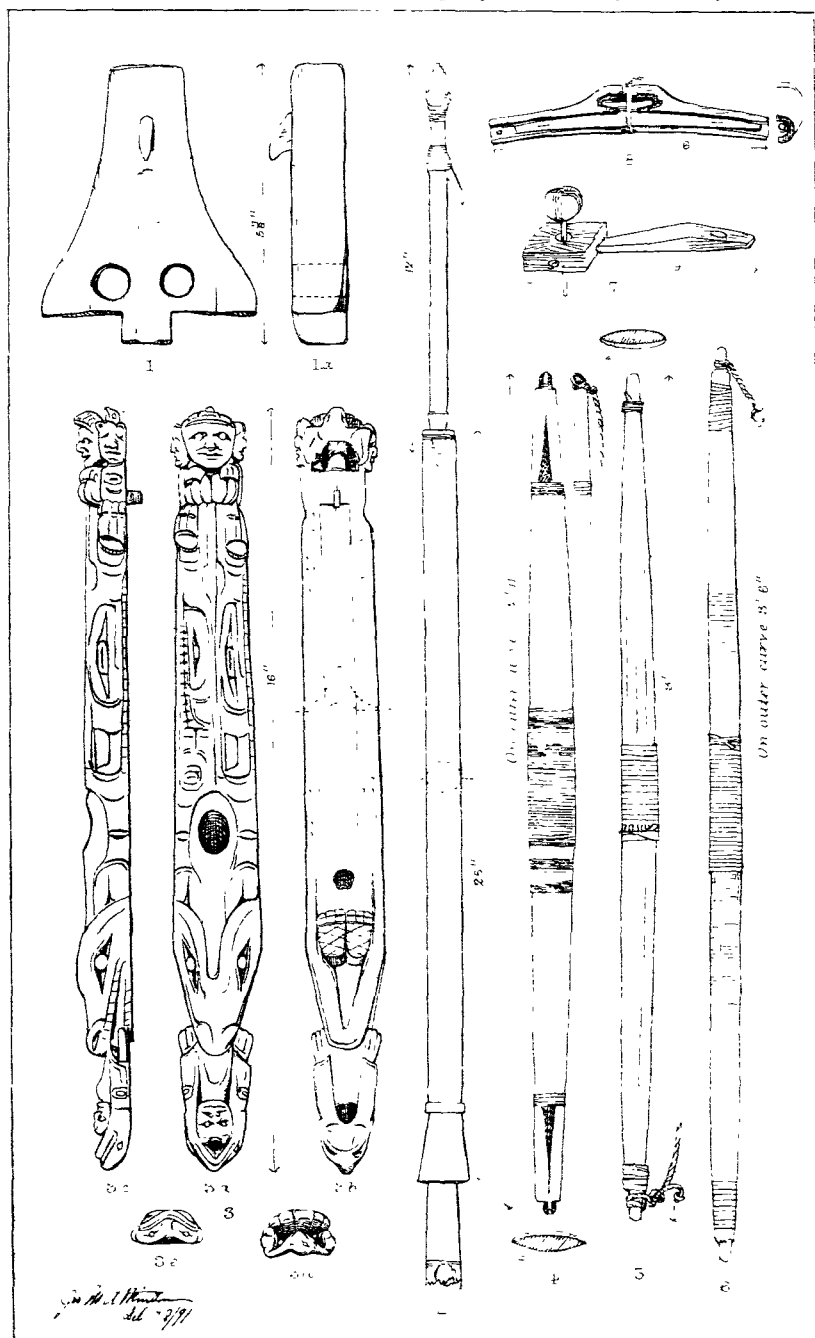
Fig. 6.—A musical instrument formed of a small gourd, cut off at the neck, which is left open, and pierced with two holes. The ornamentation seems to be burnt in, and consists of zigzags and circles with a dot in the centre of each. There are two others in the collection, of the same principle, and with similar ornament.

Plate XI.

Fig. 1.—Spear-thrower of moderately hard, light-coloured wood, pierced with two holes for the first two fingers: the hook is made of a piece of bone, rudely shaped. The whole seems to have been once covered with red colour, now almost worn away. From the bone hook to the projection at the broad end of the implement is a shallow channel, as is usually found. This would seem to be the "Santa Barbara throwing stick" of the MS. catalogue, both from its similarity in work to the other Santa Barbara specimens, and from the fact that the other throwing sticks in the collection correspond with their respective numbers in the catalogue. This variety is unknown to me from any other source, and it does not occur in Mr. O. T. Mason's "Throwing Sticks in the [United States] National Museum," Washington, 1890.

Fig. 2.—Spear with loose head, with chert point and bone barb both lashed on, and the lashing afterwards coated with black gun. The shaft is cylindrical and coloured red like the last. Its full length cannot now be ascertained, as it is much eaten by weevils and the butt is broken off and lost. In the MS. catalogue it is called a "Spear for fish, Santa Barbara." The bone barb is very similar to the hook on the throwing stick (Fig. 1). It is probable that the head was originally attached to the shaft by a line.

Fig. 3.—Throwing stick of pine wood, from Cross Sound, between the mainland of America and Chichagov Island, immediately north of Sitka. This is a variety which likewise does not appear in Mr. Otis Mason's work cited above, and



W. H. Holmes, Jr. 1912

COFFERS FROM PACIFIC COAST OF AMERICA
Gardner's voyage

that was the principal reason for figuring it here. A similar specimen, however, is figured in Mr. Niblack's excellent monograph on "The Coast Indians of Southern Alaska and Northern British Columbia" in Report of U.S. National Museum for 1888, Plate XXXVI, Fig. 127. The specimen there figured is said to be from the Tlingit of Sitka, who are further stated not to be known to use the throwing stick. The five views given in my plate will sufficiently explain the form and detail of the specimen from the Vancouver collection, the transverse section being given across the middle of Fig. 3B. It should be stated that the peg against which the spear butt would fit is made of iron. It can be seen projecting from the upper end of Fig. 3C. The designs are totemic, with human faces and figures at both ends, the feet of one of them appearing towards the lower end of Fig. 3B. The method of holding this instrument differs from that of Fig. 1, inasmuch as one finger only, probably the index finger, is passed through it.

Fig. 4.—Bow of cedar wood, probably from the coast of Upper California. It is figured on account of its complex construction. The bow is reinforced on one side along its whole length by a strip of sinew accurately fitted to the width and convexity of the face of the bow; in addition to this, each end is partially sheathed in large quills, split and laid upon a bed of black gum; and the two extreme ends are curved so as to resist firmly the tension of the bow string. The grip in the middle of the bow is bound with a flat thong of leather, and beyond this, on each side is a binding of finely plaited quills, varying in colour. The bow string is of twisted sinew. Vancouver's description of the bows of the natives of Port Discovery would seem to correspond very nearly to this, but it scarcely seems to belong so far north (Vancouver's Voy., 1798, vol. i, p. 253). For bows of the type of this and the two following figures, see H. Balfour in our *Journal*, vol. xix, p. 220, and Plate V.

Fig. 5.—Bow of similar make, from Trinidad Bay (Porto de la Trinidad), Upper California. The quill sheaths at the two ends of the preceding specimen are absent, and the binding at the grip consists of a leather thong only. The bow string has been lost and replaced by a piece of ordinary cord. The coating of sinew on one face corresponds exactly with that of Fig. 4. This would seem to be an undoubted example of the bow used by the Indians residing around Trinidad Bay in Vancouver's time.

Fig. 6.—Bow on the same principle as the two last, but narrower in proportion to its thickness. From Santa Barbara,

Upper California. In this specimen the grip is bound with a narrow leather thong, apparently once coloured red. The sinew coating is in excellent state; the two ends are bound with sinew and strips of leather, and the bow string is of neatly made sinew rope of three strands. A portion of the wood on each side of the middle is coloured black. The wood is of a lighter colour than the other bows, being yellowish in tone.

Fig. 7.—“A Nootka Sound top.” This description is written upon the object itself, while the MS. catalogue calls it a “Humming top from Mowachut or Nootka Sound.” It appears to be complete, with the exception of the string. The whole apparatus is made of light brown wood. The long peg of the top passes through the hole in the square block at the end of the handle. From the edge of the block a second hole joins the first at right angles, and it is through this second hole that I imagine the string for spinning the top would pass.

Fig. 8.—“Man’s lip piece and case, from Cook’s River,” the name first given by Vancouver to Cook’s Inlet. It appears to be made of white quartz, and the case has been made to fit it with fair accuracy, and the whole is held together by a piece of sinew cord. The points have been twice broken and mended, by drilling each side of the fracture and passing through the holes a piece of fine sinew. To illustrate the method of wearing these ornaments, there are several paper masks in the collection, having the lip ornament in position. One of the form of that in the plate is fixed midway between the lower lip and the point of the chin.

APRIL 28TH, 1891.

EDWARD B. TYLOR, Esq., D.C.L., F.R.S., *President, in the Chair.*

The Minutes of the last meeting were read and signed.

The election of the following new Members was announced:—

Sir HENRY W. PEEK, Bart., of Wimbledon.

Mrs. E. B. TYLOR, of Oxford.

EUSTACE JOHN KITTS, Esq., of Moradabad, N.W. Provinces, India.

The following presents were announced, and thanks voted to the respective donors:—

FOR THE LIBRARY.

- From the AUTHOR.—*Recherches Anthropologiques sur le Squelette Quaternaire de Chancelade, Dordogne.* 8vo. Lyon, 1889.
- *The Mammoth and the Flood.* By H. H. Howorth. M.P., F.S.A., &c. 8vo. London, 1877.
- From the PUBLISHER.—*The Evolution of Property.* By Paul Lafargue. 8vo. London, 1890. (Swan Sonnenschein.)
- *Darwinism a Fallacy.* By W. W. Pocock, B.A. 8vo. London, 1891. (Kelly.)
- From the MUSEUM.—*Le Muséum National de Rio de Janeiro et son influence sur les sciences naturelles au Brésil.* By Ladisláu Netto. 8vo. Paris, 1889.
- From CUTHBERT E. PEEK, Esq.—*The English Catalogue of Books for 1890.*
- From the GOVERNMENT OF PERAK.—*The Perak Government Gazette.* Vol. iv. No. 6.
- From the EDITOR.—*The American Antiquarian.* Vol. xiii. No. 2.
- *Internationales Archiv für Ethnographie.* Bands i, ii, iii, and Band iv. Heft 1, 2.
- *L'Anthropologie.* Tome ii. No. 2.
- *Nature.* Nos. 1120, 1121.
- *Revue Scientifique.* Tome xlvii. Nos. 16, 17.
- *Revista Argentina de Historia Natural.* Tomo i. Entrega 2.
- *Science.* Nos. 426, 427.
- From the MUSEUM.—*Archivos do Museu Nacional do Rio de Janeiro.* Vol. vii. (1887.)
- From the ASIATIC SOCIETY OF JAPAN.—*Transactions.* Vol. xviii. Part 2.
- From the ROYAL SOCIETY.—*Proceedings.* No. 298.
- From the SOCIETY OF ARTS.—*Journal.* Nos. 2004, 2005.

The Secretary read a paper by Professor A. C. HADDON, on a Message Stick from Jardine River, and Notes on Queensland Natives.

Dr. TYLOR, Mr. H. BALFOUR, Professor FLOWER, and Mr. WALHOUSE joined in the discussion.

A Communication on the Superstitions, Burial, and other Customs of the Natives of Borneo, from the papers of the late BROOKE LOW, Esq., edited by H. LING ROTH, Esq., was read by the Secretary.

The PRESIDENT, Dr. CODRINGTON, Sir HUGH LOW, Mr. COUTTS TROTTER, Mr. ATKINSON, and Professor RUPERT JONES took part in the discussion.

The NATIVES of BORNEO. Edited from the Papers of the late
BROOKE LOW, Esq., by H. LING ROTH.

I. MAGIC, BURIAL CUSTOMS, FESTIVALS, AND WOMENFOLK.

1. *Magic.*

THE Dyaks are troubled with many superstitions. Days are lucky or unlucky; places are fortunate or the contrary; many birds are *antu*, and their presence foretells all kinds of mischief to traveller or to farmer who pays no attention to the warning.

During a trip up the *Rejang* river a *pankas* (omen bird) was heard on the right and the people assured me I should succeed in everything I undertook on this trip; further on we heard a *katupong* (omen bird) also on our right, and we stopped a few moments to show our respect by casting it an offering of betel-nut, and then went on; finally we heard a *muntjak* as we pulled away from the landing place. Dian says, if he were not with me he would go back, as no *Kyan* would dare to go on in face of such a warning as the last. The omen, he declared, could not be worse, and no native would be mad enough to disregard it; he would go home and stay there. He would do the same if he were to hear a *musang* on the eve of departure or to see a *pelahabong* (snake with red head and tail). The birds they believe in are six in number, and are called *pisit*, *bukang*, *tetajan*, *asi*, *mangilieng*, *kikieng*.

If they hear a *pisit* or *bukang* on their left, they stop, wherever they may be, for the rest of the day; and if a *kikieng*, a *tetajan*, an *asi*, or a *mangilieng*, they are bound to remain where they are for two days. If on starting, however, they are fortunate enough to hear three or four of these birds, one after another, on their right, then they continue to the end of the journey and pay no attention to whatever they may hear on their left.

The *mangilieng* is a kite, and they also draw omens from its flight.

An up-country Dyak, head of his tribe, went once with all his young ones, to raise their boat out of the sand in order to prepare it for a war expedition. During the operation they heard the bird *kiki* to the left hand; this was a "bad" bird. Again they tried to work; again they heard the bird. When the boat was ready to be launched, the bird was there again. The young men then all ran away, and declined to follow their chief. Nothing daunted, the chief took his three sons and filled his boat with men of other tribes. When he arrived at

Katibas, he would not listen to the advice of the Rajah, but at night, with about five other boats, he stole away and got in advance, and went up a small river where his party were followed by two large boats of the enemy, who closed in for a hand-to-hand fight, and who were aided by a large force on the banks. The slaughter (for Dyak warfare) was frightful. The chief was wounded and his eldest son killed, as also was the greater part of the crew. So with a very few followers he had to return home in a boat of the enemy which he had captured. This disastrous result was ascribed to the neglected warning of the *kiki*.

The Dyaks look upon particular birds as ministering spirits who have the power of giving notice of good or bad fortune to come, and so warn them of danger or cheer them by prospect of success. They suppose that these birds are their ancestors who have been transmigrated in order to watch over the welfare of their tribe, and who are still interested in everything connected with it. None but the brave are thus distinguished. Every household has certain birds which it follows and other birds which are of ill omen, that is, which warn of approaching danger. Once, it is said, when an unusually brave man was fighting, the enemy cut off his *chawat* (loin-cloth) behind; he died and became a bird without a tail.

The *burong-beragai* is esteemed sacred by the Dyaks, and may not be killed. Its plumage is rich and beautiful.

There are other creatures besides birds whose notes of warning they observe.

To hear the cry of a deer is at all times unlucky, and to prevent the sound reaching their ears during a marriage procession, gongs and drums are loudly beaten. On the way to their farms, should the unlucky omen be heard, they will return home and do no more work for a day.

A *kijang* or wild goat when heard on the hill near the farms sends all the people home. A deer crying at night keeps all at home the next day. A *bujang* (a kind of grasshopper) sounding at night is a sign of a healthy house, but should he go on till dawn no one goes out. A cobra crossing the path compels the return of the advancing party. A rat on the farm has the same effect. If a dead cobra is found on a farm after it has been burnt, it makes the farm *mali*, i.e., the crops cannot be consumed by the owner's family without a death occurring within a year. They will not intentionally kill a cobra, nor one particular species of the lizard, nor owls, nor any of their birds of omen. There are also certain animals and birds which many families abstain from injuring, in some cases owing to a dream, in others to keep up a tradition received by them from an ancestor. In some tribes it is forbidden to kill a civet, an orang

or a crocodile. The orang once helped the Balaus (tribe) on a critical occasion.

Those who dream of the cobra are lucky. The spirits, too, often adopt the form of snakes.

The *tuah* is some fish, bird, or beast which makes the totem of some family or tribe, and which they may not kill or eat.

Several Dyak tribes object to eating pork or venison or other animals; but it is because they are afraid of getting certain complaints or skin diseases, and the custom becomes hereditary, as many families are subject to these complaints, or it arises from the fear of going mad. Some married women tremble at touching deer's flesh previous to the birth of the first born, or because they have been warned in dreams to abstain from particular kinds of food. Their religion does not forbid them to eat any particular kind of animals.

There is a pond at Aäp on the Rejang river which the natives do not care to approach, there being something uncanny about it. The Kinahs (tribe) have a great reverence for the rocks of the river on which they live, and if they affirm with a *Bato* (River) *Buloi* or *Bato Bulan*, or *Bato* whatever it may be, you may be sure they are stating the truth. Dian says the gift of a tiger's tooth to a Kinah chief will make him your friend for life, and he will never fail you or turn false to you for fear of being devoured by the beast.

If a Dyak dreams of falling into the water he supposes that this accident has really befallen his spirit, and he sends for a *manang*, who fishes for it and recovers it. The *manangs* profess that in addition to the true spirit given by God to man, there are other spirits, *i.e.*, the shadows which ordinarily attend every man wherever he goes.¹ These are the spirits that fall into the water. The *manang* gets a platter before him and fills it with water. After incantations, he fishes in this platter with hand nets. He pulls these out a few times with no result. At length the spirit comes up, is captured, and restored. No doubt Dyaks often concoct dreams out of their waking thoughts to suit their interest, yet they are implicit believers in the reality of dreams, and will not spare expense to atone by ceremony or sacrifice for a bad one.

Dyak women when they want to separate from their husbands and have taken a liking for another man, allege that they have dreamt that if they do not separate they will die in pregnancy. This is generally accepted, as it is customary to put faith in dreams, and there seems to be no test whether the alleged dream be true or not.

Dyaks, before they dare occupy a new house, kill a pig and

¹ See p. 117.

examine the entrails; if the reading is unfavourable, they abandon the house. If the post of a house gives way, it is looked upon as an unlucky omen. If a dog climb up into a house that is being built when the gongs are beating, it must be killed. If anything uncanny happens in a house, for which they cannot account (such as the finding of blood on a mat during absence of the inmates), it is supposed to be caused by a spirit, and they resort to the usual rites to avert the omen, by killing a pig. If the reading of the entrails prove unsatisfactory the house is abandoned, be it ever so good. If the *katupong* enters a house at one end and flies out by the other it is an omen. The *katupong*, according to Dyak belief, is not really a bird, but a supernatural being married to *Dara Ensing Tamaga*, the eldest daughter of *Sin Yalang Durong*, the god of war, and takes the form of this bird to warn Dyaks of approaching danger. When this occurs, flight is instant, men and women snatch up a few necessaries (mats and rice) and stampede, leaving everything unsecured and doors unfastened. If any one approaches the house at night, he will see large and shadowy demons chasing each other through it, and hear their unintelligible talk. After a while the people return and erect the ladder they have overthrown, and the women sprinkle the house with water "to cool it."

The Sedumat and Kalakan Dyaks of Lundu believe that when an eclipse occurs some large animal in the shape of a dog is worrying the moon (or sun) and they bring out their brassware and portions of food to present them as offerings to appease this powerful beast. They then fire guns, beat gongs, scream out, and make all the noise they can to drive him away.

The chief of the Uma Lesong tribe gave me a *tukar do*, a kind of sun dial with which is measured the shadow of the meridian sun in a certain month of the year, and by its length is determined the season to plant with advantage. If the shadow be such and such a length the yield will be plenteous, if such and such another length it will be meagre, and if it be a certain other length there will be plenty, but there will be weeping as well.

After three the Dyak's favourite number is seven.

Dyaks are so unreasonable that they expect to get everything their own way, and feel aggrieved if they do not. If they do not get dry weather when they want it, they pray for it, and try to propitiate the deity with offerings. If this fail they fancy someone must have committed an unnatural crime (incest, to wit), and they strive to find out such an offender, and lay upon him the blame for all the trouble they are experiencing.

Not very long ago they would have punished such an offence with death or at mildest with slavery. If they are deluged with rain when the crops should ripen instead of sunshine and dry weather, or should a landslip occur, &c., &c., they fancy the same (unnatural lust), and visit the offender with condign punishment and purify the earth with blood of pigs and fowls.

On one occasion an Undup Dyak married his first cousin, and the people refused to visit him unless he asked *ampun*, i.e., forgiveness. To obtain this he killed a pig and threw the whole of it into the river with one plate and a *duku* (chopper). I tried once to make out of whom they asked pardon, and I was told, as I always am, "*sighi adat kami*—only our custom." They said it was to no evil spirit, but to the whole country, in order that their paddy might not be blasted (see p. 133).

A man from Banting once came to me to ask for medicine for his brother, who, he said, was unable to move his lower limbs, and that part of his thighs were falling off in pieces. Afterwards I found out that the man had been trimming or topping a tree on his farm called *rara*. This tree is an *antu* tree, and, generally speaking, nothing will grow under it or near it. It is forbidden amongst the Dyaks to cut it unless they first take a hatchet which they carefully wrap round with cotton; they then strike as hard as they can, leave the axe in and call upon the *antu*, either to leave the tree or to give them the sign that he does not wish it cut down; then they go home. Next day they visit the tree, and if they find the axe lying on the ground they know it is inhabited and do not attempt to cut it down; if the axe still remain in, they can, without danger, cut the tree down. I consider it is no *antu*, but strychnine which exists in the sap to a large percentage. Now, so long as the sap is running, no axe would long remain in, but must necessarily be cast out by the action of heat and the expansion of the gutta exuding. If the axe remain in, it proves only that the tree is not lively but ready to die. The gutta falling on the skin is taken up and absorbed and so impregnates and poisons the whole body.

The *manangs* or medicine-men of the Sea Dyaks rank next in importance to the *Tuah Rumah* or village chiefs, and it is by no means an unusual thing for the medicine-man himself to be the chief of the village in which he resides. There is nothing whatever to prevent him becoming so, provided he be popular; but to be popular he must be a faithful interpreter of dreams and a powerful exorciser of evil spirits. The entire system of the *manang* is based upon superstition and imposture supplemented with a smattering of herbalism. His reputation depends upon the number of cures he is able to effect; or, in

other words, upon the trickeries his superior cunning enables him to practise upon the credulity of the people. The *manang* is an hereditary institution; it does not necessarily descend from father to son, but it is usually confined to the family.

To ensure success in his profession his cunning must be of a high order, otherwise his rogueries would be detected and his services discontinued. The more effectually to shield him from the possible revelations of a too prying curiosity he envelops himself and his belongings in a cloud of mystery. As it would be ruinous to him were his box of charms and devilries exposed to public view, he announces the punishment of blindness to any human being venturesome enough to peep into it.

There are two descriptions of *manangs*, the regular and the irregular. The regular (*manang ngaga antiu*) are those who have been called to that vocation by dreams, and to whom the spirits have revealed themselves. The irregular (*manang ngaga diri*) are self-created and without a familiar spirit.

The regular are male and female *manang laki* and *manang in-du*, and also *manang bali*, or unsexed males, of whom more anon. When a person conceives a call from the spirits he bids adieu for awhile to his relatives, abandons his former occupation, and attaches himself to some thorough-paced *manang*, who, for a consideration, will take him in hand and instruct him until he is fully qualified to practice on his own account. It is not enough, however, for him to simply say that he feels himself called; he must prove to his friends that he is able to commune with the spirits, and in proof of this he will occasionally abstain from food and indulge in trances from which he will awake with all the tokens of one possessed by a devil, foaming at the mouth and talking incoherently. At the ceremony of initiation, when he is admitted into the order, his body is supposed to undergo a complete change; he assumes a new name, and among other things his fingers are furnished with fish-hooks to enable him to clutch the human soul about to fly away, and reintroduce it into the body, thereby prolonging life. Gold is put into his eyes to clarify his vision and so to enable him to see the spirits and the things invisible to others, and in various ways he is miraculously gifted; his skull is said to be cleft open, &c.

The *manang* looks upon a sick person as being possessed with an evil spirit, and as long as this evil spirit remains in possession the patient cannot regain his health, he conjures it to depart; if it be obstinate and will not go he summons his own familiar spirit, and requests it to show him in what way the tormentor may be prevailed upon to take its departure.

He acts upon its suggestions and propitiates it with sacrifices; but if it still prove obstinate and refuse to budge, the *manang* admits his inability to deal with it, and some other wizard is called in who is believed to have at his command a more powerful familiar. Whether the patient live or die the *manang* is rewarded for his pains; he makes sure of that before he undertakes the case, for he is put to considerable inconvenience, being fetched away from his own home and obliged to take up his abode with his patient; he can therefore undertake only one case at a time, but to it he devotes his whole attention. He takes his meals with the family, and in other ways makes himself quite at home. If a cure be effected he receives a valuable present in addition to his ordinary expenses. Herbal remedies are frequently administered by him, and a diet enjoined. Such treatment works wonders in all simple disorders, and not unnaturally, but to enhance the value of the cure, spells are muttered and cabalistic verses recited exorcising the foul fiend that is tormenting the body. I have known *manangs* to have administered in this way European medicines procured from the Government dispensary, for they are wide awake and ready at all times to avail themselves of remedies of known efficacy. Every regular *manang* is supposed to be attended by a familiar spirit who is good and powerful; but it often happens that the evil spirit is the more powerful of the two, and when this is the case the sick man cannot recover, and death ensues. By death they understand the flight of the soul out of the body. When a person complains of pain in the body the familiar will often suggest that some mischievous devil has put something into him to cause the pain. The *manang* will thereupon manipulate the part and pretend by some sleight of hand to draw something out of it, a stick, or a stone, or whatever it may chance to be, which, no doubt, he has previously concealed about his person, and he will hand it about and exhibit it as the cause of the pain in the body, which he has thus been able to remove without so much as leaving a mark on the skin.

On other occasions if the disease be internal, the *manang* calls together all the friends of the sick person, making, with the assistance of others playing on gongs and tomtoms, a deafening noise sufficient to kill a person in ordinary health. He pretends to converse with the spirit which troubles the afflicted person, or he pretends to fall into a trance, during which his spirit is supposed to wander about in the spirit world to find out what is the matter with the patient.

His method of treating diseases is not very conducive to the restoration of health, but if the strength of the person is suffi-

cient to bear him through, it is well; but should the patient die no blame is attached to the *manang*, but it all devolves on the malignant spirit, who is certainly not so black as, on these occasions, he is painted.

Once during a journey up the Rejang river a wizard was called in to visit the sick wife of one of my companions. He was dressed in war costume and wore his side-arms. The sick person was a female and was seated close to where he was standing. The room was crowded with people and but partially lit with a single torch. The gifts were hung up in a row under a *cajang* canopy and Bua Dieng, the conjurer, was to cast out the devil who was tormenting the woman by the help of his familiar Avun Lalang. The first thing for the wizard to do was to discover through the instrumentality of his familiar whether the woman was destined to die. Being satisfied she might yet live he conjured his familiar to discover to him the evil thing that was vexing her body, and after a great deal of mystery and exorcism he gingerly exhibited between his finger and thumb a ball of moss which he claimed to have found in her head. His face was now a picture of horror as he offered to introduce this noxious thing into someone else's head, driving this other person nearly wild with terror until the latter was reassured by seeing it flung out of the window.

Another form of cure is similar to that well-known one of sorcery found in Europe, and was witnessed as follows:—A son of Uñaté, Laghieng by name, a boy of tender age, was suffering from some disorder of the stomach, whereupon his mother quickly procured the services of a *manang bali* (hereafter described), who made effigies of mother and child by means of bundles of clothes. The effigy of the mother wore a mask, earrings, jacket, and turban; that of the child, with beads for eyes, a turban, and a scarlet *chawat* (loin-cloth) was placed between its legs. The gifts to the "devil" were hanging in a row under a *cajang*, and consisted of Uñaté's shield decorated with human hair at the one end, and his war jacket of panther-skin adorned with horn-bill plumes at the other end, while in between were the wife's waist-beads and showy clothing. The object of the witch was to persuade the devil to accept these bribes and leave the boy to recover.

The Dyaks believe that every individual has seven souls (*samangat*), and that when a person is sick, one or more of these are in captivity, and must be reclaimed to effect a cure. Dyaks when visited by any severe sickness (as cholera) ask forgiveness of the *antu*. They build a small hut like one of their own houses, put a piece of matting on the floor, and then place rice, cakes, fruit, and eggs on plates as an offering; these

they place in the hut, and round about they hang their gongs and place their jars on the ground near. A fowl and pig are killed and the blood sprinkled about the hut. All the roads to the house are shut up for three days; no work of any kind is carried on. They visit no one, no one visits them. Each man gives his share of rice and things to the *antu*.

The *Pansa Antu* is a sudden unaccountable illness from having seen a demon.

A Dyak never admits he is well, nor can you say so to him. So anything eaten is never praised. If a man is convalescent, you must not say, when before him, that he is improving, or looks well, whatever you may say to others upon the subject. It will make him feel uncomfortable and dread a relapse.

Some *manangs* are provided with a magic stone into which they look to see what is ailing a man, and prescribe for him accordingly. Every genuine *manang* is provided with a bag of charms called *lupong*, to him a collection of inestimable value: being a present to him from the spirit world, it is irreplaceable if lost or stolen. In reality its contents are a mass of rubbish, curious sticks and stones, abnormal developments of cane and root, tusks and teeth and excrescences of horn, with here and there a herb or two, such as turmeric, ginger, &c. *Pengorah rumwah* are the bundle of charms handed from father to son and hung on the head of the post (see "Habitations"). Among Gari's (a *manang*) collection I observed a smooth venetian red pebble and a so-called cock's egg, and he mentioned as stolen a yellow stone bead and a gold button. The charms are used in a variety of ways, sometimes the body is rubbed with them, sometimes they are dipped in water, and the water thus enchanted is drunk, and sometimes a bit is given to the patient to wear about his person as a talisman to ward off some particular danger.

When a *manang* is in attendance upon a sick person, visitors are not received.¹ The room he occupies is tabued, and, if circumstances require it, so is everything that belongs to him: his farm, his fruit-trees, and his garden. The language used by the *manangs* in their incantations is unintelligible even to the Dyaks themselves, and is described by the uninitiated as *bungai jaker*, i.e., *manang* gibberish. Some profess to understand what is said, but if they really do so it is because they have taken the pains to learn it with the view, no doubt, of performing cures on their own account later on. It may be simply some archaic form of the ordinary spoken language interspersed with cabalistic formulæ, spells and charms for different purposes. *Timong*, the monotonous chant of the *manangs*, is a mixture of prayer and invocation, cursing and imprecation; like the other

¹ This appears to be a contradiction to the statement on page 116.

it is not modern, and is largely mixed with archaic forms and disused words; sense gives way to the exigencies of rhyme with jingling-like endings, and it has a refrain.

The *manang bali* is a most extraordinary character, and one difficult to describe: he is a male in female costume, which he will tell you he has adopted in obedience to a supernatural command, conveyed three separate times in dreams. Had he disregarded the summons he would have paid for it with his life. Before he can be permitted to assume female attire his organ of penetration (*membrum virile*) is disabled. He will then prepare a feast and invite the people. He will give them *tuak* to drink, and he will sacrifice a pig or two to avert evil consequences to the tribe by reason of the outrage upon nature. Should he fail to do all this every subsequent calamity, failure of crops and such like, would be imputed to his conduct and he would be heavily fined. Thenceforth he is treated in every respect like a woman and occupies himself with feminine pursuits. His chief aim in life is to copy female manners and habits so accurately as to be undistinguishable from other women, and the more nearly he succeeds in this the more highly he is thought of, and if he can induce any foolish young fellow to visit him at night and sleep with him his joy is extreme; he sends him away at daybreak with a handsome present and then, openly before the women, boasts of his conquest, as he is pleased to call it. As his services are in great request and he is well paid for his trouble, he soon grows rich, and when he is able to afford it he takes to himself a husband in order to render his assumed character more complete. But as long as he is poor he cannot even dream of marriage, as nothing but the prospect of inheriting his wealth would ever induce a man to become his husband, and thus incur the ridicule of the whole tribe. The position as husband is by no means an enviable one; the wife proves a very jealous one, and punishes every little infidelity with a fine. The women view him, the husband, with open contempt and the men with secret dislike. His only pleasure must be in seeing his *quasi* wife accumulate wealth and wishing her a speedy demise, so that he may inherit the property.

He (the *manang bali*), on the other hand, the more nearly to resemble a woman, lays himself out to entice some young fool to sleep with him, and he takes good care that his husband finds it out. The husband makes quite a fuss about it, and pays the young fellow's fine with pleasure. As episodes of this kind tend to show how successfully he has imitated the character of a woman he is highly gratified, and rises, accordingly, in the estimation of a tribe as a perfect specimen.

It is difficult to say at what age precisely a person may become a *manang bali*. One thing, however, is certain, he is not brought up to it as a profession, but becomes one from pure choice or by sudden inclination at a mature age. He is usually childless, but it sometimes happens that he has children, in which case he is obliged to give them their portions and to start afresh unencumbered in his new career, so that when he marries, if he be so minded, he can adopt the children of other people, which he frequently, nay, invariably, does, unless it so happen that his husband is a widower with a family of his own, in which case that family now becomes his.

The *manang bali* is always a person of great consequence, and manages, not unfrequently, to become the chief of the village. He derives his popularity not merely from the variety and diversity of his cures, but also largely from his character as a peacemaker, in which he excels. All little differences are brought to him and he invariably manages to satisfy both parties, and to restore good feeling. Then again his wealth is often at the service of his followers, and if they are in difficulty or distress he is ever ready to help. The *manang bali* as an institution is confined, to the best of my knowledge, to the remote tribes of the Sea Dyaks: the Ulu-Ais, Kañaus, Tutong, Ngkaris and Lamanaks. It is not unknown to the Undups, Balaus, Sibuyaus and Saribas, but is not in vogue among them, owing perhaps to their vicinity to the Malays, who invariably ridicule the practice, and endeavour to throw it into disrepute.

2. *Burials.*

The Sea Dyaks dispose of their dead by burial. A person having died, the *manang* or medicine man who was in attendance during the sickness is charged also with the superintendence of the interment, for which he is paid an extra fee. All the able-bodied men in the village turn out to assist the bereaved family, as it is expedient, where possible, to bury the same day. As soon as a coffin is got ready by their united effort the body is laid in it, dressed in its finest apparel, and shrouded from head to foot in a winding sheet of new cloth. With it are placed, for use in the next world, various articles of clothing, personal ornaments, weapons of warfare and instruments of music, according to its sex and natural proclivities. Some of these things belong to it, others are given to it by friends and relatives as tokens of affectionate regard. The women are not permitted to accompany the coffin to the grave, so they raise a dismal wail as it is being carried by the men to the river-bank, to be conveyed from thence by water to the burial ground of the

tribe. The women renew the wailing as the funeral procession sweeps past the village, and only discontinue it when the boats are out of sight. The *pendam*, as the burial ground is called, is never far away from the village, and is always, when practicable, on the side of a hill rising abruptly from the river, and is covered with immense trees, which throw a sombre shadow across the water. The Dyaks regard it with a superstitious terror as the abode of spirits, and never visit it except to deposit their dead, and when obliged to do this they never stay longer than they can possibly help, but hurry away as soon as their business is dispatched, for fear of meeting with ghosts. The consequence is that the place is uncared for; the graves, being shallow and ill-secured, are rummaged by forest animals, and bones and skulls strew the ground. The graves are rarely more than three feet deep, if so much; they use no hoe or spade to turn up the soil with, but cut at it with their choppers, and throw up the mould with their hands. They dare not get into the grave to make it deeper, but they kneel to it, and lie on the brink, and dig into it as far as their arms will reach, and no farther. This they do from a superstitious belief that any person stepping into an open grave will die a violent death. But before they can commence to excavate at all, a fowl must be killed and its blood sprinkled on the ground as well as smeared on the feet of the corpse to propitiate *Pulang Gana*, whose domain they are invading. If they omitted to do this, they would incur his serious displeasure, and would die next. When the pit they dig is large enough and deep enough the coffin is lowered into it, and the mould replaced. The grave is then fenced round, food and drink are placed in the enclosure, and at either end of it something is put indicative of the sex and favourite occupation of the deceased. If the grave be that of a warrior it is roofed and curtained and decorated with streamers, his weapons and his war-gear (such as are not buried with him) are hung about, and the ground around is palisaded and spiked. If that of a hunter his blow-pipe and quiver will serve to distinguish it, together with some trophies of the chase—stags, antlers, or boars' tusks. The graves of women are indicated by some article of feminine occupation or feminine attire, spindles, or petticoats, or waist-rings, or water-gourds. The graves of rich persons of either sex are distinguished by jars and gongs, secured in their places by stakes driven through them.

Any person whom it is intended especially to honour is not buried underground, but his coffin is placed in a miniature house built for him on piles some eight or ten feet high, with a railing round it. Wise men and women are treated in this fashion, that is to say, such wise persons as are reputed to be

more cunning than their fellows by reason of their superior knowledge of the stars, the Pleiades in particular, by which they regulate the season for rice-cultivation. After the burial the men return straight to the village and an *ulit* commences, which ends with the feast called *gawai antu*, held, when required, as early as possible after the interment. Should, however, a human head have been obtained in the interval and paraded in the village, the restrictions are partially removed and ornaments are permitted to be worn. The *ulit* is confined to the immediate relatives of the deceased, and does not concern the community at large. During its celebration music is tabued, and so is uproarious mirth; ornaments and gay clothing are laid aside, and deep mourning assumed. The dead man's groves and water-courses are tabued to furnish fruit and fish for the feast to his memory to be held after the harvest.

When a death occurs the entire village abstains from outdoor labour, and remains at home for seven days in the case of a male, for three days in that of a female, and for one in that of an infant. During the mourning none of them sleep in their rooms, but in the open verandah; I believe this is to allow the spirit to have free access into the room. The immediate relatives of the deceased are confined to their own apartments for three days, on the first of which they have to wail for the dead, and on the second and third of which hired wailers, at a plate a head, perform this office for them. Betel and rice are denied them, and the wailing is repeated at certain intervals until the *gawai antu*. If the deceased be a married man the widow may not leave her room for seven days; so everything she requires is brought to her; she wails for her dead husband morning and evening; she may not marry again until after the *gawai antu*; if she do she is fined for adultery and desertion just as if her husband were alive; she is considered by custom as still belonging to him until freed from him by the performance of the last rites of the *gawai antu*; and every infidelity on her part, if discovered, is visited by the relatives with a pecuniary penalty; and they are not slow to resent anything in her conduct which can be construed into a slur upon his memory (see p. 132).

There appears to be some sort of tabu in connection with mourning, thus:—The camphor tree abounds in the forest of Balui Pè, but the Lepu Anans and others may not touch it for a couple of years, out of reverence for the memory of Ana Lia Avit, the powerful Kiñah chief, who died a few months ago. Similarly Dian's name may not be uttered in Long Sbatu, Kiñah village, it having been the name borne by a former chief here.

The bodies of the Dians and Batas, who formerly ruled in Baloi, rest in chambers of iron-wood. The *salong*, as it is called, is a Kyan institution, and foreign to the River Rejang. The *klirieng*, on the other hand, is indigenous. The former is a miniature house of iron-wood, built upon piles of the same material, with a single chamber large enough to contain the coffins of the chief, his brothers and sisters, his family and their families. The *klirieng* is either a single or double pillar, carved from top to bottom with niches up its side for the bodies of slaves and followers, and hollow at the top to receive the jar which contains the bones of the chief for whom it is raised. The pillar is covered with a heavy stone slab. One of the best *salongs* is built upon nine huge posts, three deep; the six side posts are 23 feet above ground, the two end posts which support the roof-tree 26 feet. The floor of the chamber is 18 feet above the ground, and the chamber itself is 13 × 12 feet. This *salong* differs from other *salongs* in having, besides, a centre post of 7 feet girth rising above the floor but not reaching up to the roof; it is, in fact, a *klirieng* within a *salong*, being hollow towards the top, but with the aperture on one side. I shifted the yellow curtain which hung over it, and saw the jar, a valuable one; between it and the walling were the personal effects and funeral gifts—mats, baskets and weapons. The pillar outside was furnished with handles, upon which hung boys' nose flutes and lutes. There were four coffins in the chamber, and the *débris* of others littered the floor. There were paddles and shields up against the walling. The roof is formed of *bilian* planks, and cannot be prised open. It is 27 feet long at its greatest length. The chamber is provided with a door at one end, and is fastened from the inside. Faces of hideous demons are carved upon the posts, with cups for eyes. On the ridge of the roof is an enormous wooden dragon, and the rafters (five on each side) all end in a carved monster called *Aso*, defying description. The bodies of slaves and faithful followers were placed upon scaffolds under the floor and between the posts side by side with the war boat of the chief. In front of the mausoleum is a pointed stake, 16 feet above ground, upon which human heads were stuck and prisoners impaled. Another *salong* is not so well preserved, but is larger and more massive. The chamber is 14 × 13 feet, the posts are 12 in number, three deep, but four in a row. The eight outside posts are 22 feet above the ground, and the two end ones 26 feet; the centre ones do not pierce the floor. It was formerly the practice to drive the principal post into the earth through the body of a living captive or slave, a custom still in force in some parts. A Kajaman double *klirieng*, the best in all Baloi, has the

following dimensions: the pillars are carved from top to bottom and capped with a ponderous stone slab; they are both of the same height and stand 32 feet above the ground. The girth of one is 11 feet 7½ inches, that of the other 6 feet 11½ inches.

At a Kyan grave at the foot of a tree I saw the body, according to custom, exposed on a raised platform; the skull had dropped on the ground, the bones were on the scaffolding, and the personal effects hung around.

On the Rejang River I met a funeral procession of a Punan on the water. The boats, three in number, carrying their precious burden, the bones of the Punan in a jar, were lashed together; the company was composed of a dozen women and some eighteen men, and the centre boat carried in her bows a tree, the branches of which flare with streamers, red and yellow, black and white. The jar was deposited in the hollow at the top of the pillar, and the trophy of flags was planted on a mound by the waterside, a few hundred yards away.

A Skapan coffin I once saw was canoe-shaped, carved and painted; the bottom was filled with ashes upon which the body was laid with the hair hanging out over the side for the mother to look at, and the lid sealed down with pitch to keep in the smell. The coffin was set in one corner of the room, and over it hung the belongings of the dead person. It was kept for a year or more and then carried out into the open air, when the lid was prised open and the bones collected for burial in a jar.

The bodies of those who die from an outpour of blood and of women in child-birth, are not allowed to remain in the house, but are taken away at once and buried in the earth without ceremony and without a coffin. The bones of such are not collected.

In Kajaman territory some coffins were slung upon a tree, the leaves of which had been plucked and replaced by strips of coloured cloth, which gave it a festive appearance. The coffin is always treated in this manner after the bones have been removed. It is perched upon a branch and either falls to pieces in the process of time or is carried away by the first big fresh. At a Kajaman's death the body (that of a man) lay in state inside a mosquito curtain on a raised dais in the verandah. The curtain was flung open for all to see. The dead man was propped up so as to assume the position of a person sitting up in bed; his legs were stretched straight before him, and his chin was held up by a cloth band; his coffin lay outside ready to receive him; his weapons and other gear hung round the curtain. His wife sat by his side fanning his face and sobbing the while.

The Kiñahs use neither the *klirieng* nor the *salong*, but a

mortuary edifice of their own. The coffin with the body in it is placed on a hard wood platform elevated upon two iron-wood pillars, and is covered with a semi-cylinder of the same material. Underneath the floor the boy's (Awen's son) things are hanging together with other things put there by his friends for his use in the world of spirits—war costumes, every-day clothing, weapons, a hurricane lamp, and a bottle of kerosine. To this day, the corpse of a certain *Gasieng Gaharn* Kiñah chief has never been buried, but is preserved in a little house built near the village, where it is continually fed, according to custom. So great is the regard for him that his people cannot bring themselves to leave it entirely, but whenever they remove to other farm lands, it is removed along with them.

3. *Festivals.*

The *Gawai Antu*, or feast to the dead of the Sea Dyaks, to which allusion has already been made, is held if required once a year, but never before the harvest. Every person in the village in whose family a death has occurred within the past year makes what is called by the Samarahan a *gong kup*, and by the Uliities a *lumbong*, that is to say, a basket of wicker-work shaped so as to resemble a shield, or a helmet, or a sieve, or something or other indicative of the sex and favourite occupation of the individual for whom it is intended. The basket is filled with cakes and bananas, and hard boiled eggs, and hung up outside the door. The day following it is taken away by the men and left on the grave as a farewell offering. The women collect together in groups whenever a death has occurred for which they are in mourning, and then they feast at the expense of the heir to the property. A portion of each viand and comestible is set apart for the spirits. A fowl is then caught and waved over each in token of amity, after which each bites a bit of iron and drinks a cup of *tuak*. The rings of blackened cane worn round the waist in mourning are now severed and replaced by coloured ones, which are supplied to each from a heap in the centre together with a *bidang*, or short petticoat, of a kind used out of mourning. The fowl is then killed and the feet smeared with the blood, and the *ulit* is at an end. The same ceremony is performed later in the day by the men, who discard their ribbons of beaten bark, and receive in exchange cloth of foreign manufacture. As their cups are replenished as soon as empty, more liquor is apt to be consumed than is positively good for them, and uproarious merriment soon sets in. Just as wailing was the order of the day, so music and dancing prevail throughout the evening.

There is a Kiñah festival called *Bunut*, which seems to be in honour of the fertility of their women and their soil. The families who have given birth to children since the date of the last festival, empty each a basketful of toys and eatables on the floor for the boys and girls to scramble for. After this the wise women of the tribe squat in a circle round a gong full of water with four water-beetles (called *irak* by the Kyans and *rung kup* by the Dyaks) swimming about in it. They draw auguries from their evolutions in the water, and implore their god *Laké Ivong* to come up their way, up the Baloi river and the Bulan river, and bring with them the soul of the paddy seed into the country of *Laké Van*. Cane juice is then poured into the water, and the mixture drunk up by the women; the beetles are taken to the river side, and dropped into the current to be carried away towards *Laké Ivong*. This ceremony is followed by a downright indecent rough and tumble, in which all join, men and women, boys and girls. They pelt one another with soft rice boiled in soot, fling one another on the ground, rub one another all over with slush until their bodies are caked with the filth. A naked man with an idiotic simper on his face wanders in and out among the crowd of revellers, and the women are made to touch his organ as he passes in and out among them. This is presumably in honour of his manhood and power, and may be simply a survival of primitive worship. The grossest licence is permitted during the quarter of an hour this orgie prevails. The verandah, which has now begun to smell like a pig-stye, is deluged with water, and one or two women slide about the slippery floor with hand-nets, and make believe to scoop up the slush for fear the rice they have wasted may never return to them again.

The Kyan harvest festival is called *Dangé*, and at its conclusion the village is tabued for a period of ten days. A pig is sacrificed according to custom, and its flesh exposed on a bamboo altar in the open air as an offering to the Great Spirit. The wise folk of the village dance a measure round it, and wind up by chasing each other round it with naked weapons; a slave woman, with a basket of food on her back, beating a gong the while. A trophy is fitted up in the verandah of the house composed of rice cooked in various ways, all manner of fruits from their gardens, every-day clothing, holiday costumes and war gear, all of which things it is the business of the mystery-man to forward to the Great Spirit as a thank-offering from the people with prayers for more of the same sort, their wants being abundance of produce, plenty of wearing apparel, the animals of the chase, and the heads of their enemies. At the village of *Balo Laké I* met the widow

of the powerful Kyan chief Oyang Hang, who was subdued by Rajah Brooke in 1863. Music and dancing went on in the evening, and was the best of the kind I have seen anywhere. The women spared no pains to please us; they turned out in troops to dance before us, and the old lady was unapproachable, her performance being inimitable. There were single dances, double dances, and company dances. Some were graceful, others were grotesque. There was the dance of the blind man feeding his pigs, which convulsed us with laughter; a deer dance, and the dance of the fishes blocking up the river, in which the feet of the performers went pit-a-pat, pit-a-pat, and the arms were swung backwards and forwards in quick time, the ends of the column changing places as the company faced about. This was followed by a ludicrous dance called the dance of the Punan women, caricaturing their untidy costume and awkward deportment. Then there was the dance of the young warrior making love to another man's wife; the performers were both women, she sat with her back to him making a cigarette; every time he danced up to her to take it out of her mouth, she shook him off, but as he danced away from her, she threw him a glance over her shoulder which encouraged him to advance again. Then there were war dances, the men in full costume, with the step and music peculiar to each tribe.

4. *Womenfolk.*

As we shall see further on, the Sea Dyak women have no reason to murmur at their condition. Their wants are few and easily satisfied. They are eminently stay-at-home people, and rarely visit, being fond of home and of domestic life. They have perhaps rather more than a fair share of labour, but this is always the case where the men spend so much time on the war path, and as the women keep the men up to the mark in this respect, they are scarcely to be pitied if extra work fall to their lot.

They are earlier risers than the men, and retire to bed earlier. They rise in fact with the earliest peep of dawn to light the fires and open the windows. They then bathe in the river, scrubbing themselves with rough pebbles and cleansing the pores of the skin with the powder of the *langir* fruit, which lathers well and effectually removes all impurities. They do not clean the teeth, but they rub the gums with the fingers and rinse the mouth and throat. The children are washed at the same time. The men do not bathe early in the morning on account of the chill, but always do so when perspiring from exertion, as while walking, &c., and dry themselves for a

few minutes in the sun before putting on their *chawats* (loincloths).

Their next duty is to prepare the morning meal. They eat with the men or not as they please, but they generally prefer to feed with the children after the men have finished. When breakfast is all over they clean up the crockery and brush the floor. The pigs and poultry are fed with the refuse, as are also the dogs.

They are now ready to accompany the men to the farm, or if not required they pursue their own occupations, which are various and manifold. As it is necessary to provide vegetables for the next meal, they visit their gardens for this purpose and bring home with them whatever they may be able to find in them, viz.:—cucumbers, pumpkins, melons, capsicums, &c. Tapioca leaves, cucumber leaves, and sweet-potato leaves are used by them as much as anything else, and they are fond of them when boiled in water.

Sometimes they go out fishing with scoop nets when they have the time to spare, or are desirous of a change of diet. It is the business of the men to provide pork, venison, and fresh fish, but the preserving is done by the women, who smoke or pickle according to fancy. There is never a want of firewood in a Dyak house; one of the first duties of a husband is to provide this, or he gets into bad odour with his wife or mother-in-law. The wood is smoked until every particle of moisture is evaporated out, and it becomes quite brittle and hard. If the women go out in the forenoon upon expeditions of the above kind, they have to be back again by the middle of the day to cook the mid-day meal. If they are busy on the farm, and mean to make a day of it with the family, they take what rice they require with them early in the morning and cook it on the spot to avoid the journey to and fro.

At two o'clock in the afternoon they pound a measure of paddy with heavy wooden pestles to free it from the husk; each woman is provided with a wooden mortar which is placed either in the *tempuan* or thoroughfare, or inside the *bilieh* or room, and two women pound away at each. At 4 p.m. they bathe, and at 5 p.m. they are busy cooking for the third and last meal of the day. After the things are cleared away they hang up the mosquito curtains, and put the children to bed, while they sit up for an hour or two to converse with the men, and retire to rest when tired.

In addition to the above routine of daily labour, they have a variety of things to do, and are never idle. They have to fetch drinking water and to nurse the babies, and when they are tired of carrying them about in their arms, they strap them on

to their back with a cloth. It is also their duty to put the paddy out to dry on the *tanju* (open air platform) and to watch it from the *ruai* (covered verandah) to keep the fowls away from it. They have besides to prepare the cotton, and to spin the yarn, to prepare the dyes, and to weave clothing for themselves and their families. After the harvest, they brew the toddy, which is preserved in jars and produced upon special occasions as a great treat. So that altogether they have generally as much work as they can well get through.

They are fond of their children, and the children are fond of them. Indeed, the latter are quite spoilt, and the more mischievous a boy is the prouder they are of him, and prognosticate great things from him when he gets older. They clothe their children earlier than the Malays do, disliking to see them run about naked. They rarely if ever punish them when naughty, so that they grow up wayward and self-willed, and though they are extremely fond of their parents they do pretty much as they please, and not as they are told. As they grow older, however, they do as they are required, not caring to displease their relations.

The young women receive their male visitors at night; they sleep apart from their parents, sometimes in the same room, but more often in the loft. The young men are not invited to sleep with them unless they are old friends, but they may sit with them and chat, and if they get to be fond of each other after a short acquaintance, and wish to make a match of it, they are united in marriage if the parents on either side have no objections to offer. It is in fact the only way open to the man and woman to become acquainted with each other, as privacy during the day time is out of the question in a Dyak village.

When a girl is visited for the first time by a stranger, he is rarely received, but if he comes several nights running, she then believes him to be in earnest, especially if he declares he means no harm, but is in search of a wife. She will then sit up with him, and after chewing *sirih* and betel nut, they discourse, often through the medium of a jew's harp, one handing it to the other, asking questions and returning answers, and conversing upon all manner of topics until the day begins to break, and it is time for him to grope his way back. If he continues to pay her attention after this, she may even invite him to lie down and sleep beside her, but her complaisance ends at this point. If he dare to take a liberty with her person, she is sure to cry out, her relatives are at hand to maul him, naked weapons would be thrown at him unless he make good his escape, and even if he do this they can bring him to book the

next day. If a woman orders a man to be off he must do as he is required. If he continue to stay when requested to retire, she gets out of bed and blows up the fire which is smouldering on the hearth, for all this goes on in a room where the parents are sleeping, and often also married brothers and sisters; but no one interferes. He is now sure to go, as he would not care to be seen. If a girl cares for a man she will let him know, if not, no amount of money can win her.

Of course immorality does ensue from this practice, but when it does occur it forms the exception and not the rule, and I believe you would not find in England a morality half as good amongst an equal number of persons. The custom does away, however, with much of the organised immorality of more civilized communities, and helps a man to a wife, and a woman to a husband, by affording them an opportunity of becoming acquainted with one another.

Even when a woman has so far forgotten herself as to submit to the desire of a man, it is as often as not simply to see whether their union would be fruitful, and if this prove to be the case, the man is bound in honour and by promise to make her his wife.

The women are so keenly sensitive to disgrace, that they will not part with their virtue for fear of the consequences. They prefer death to a life of shame, and many girls have committed suicide rather than face the displeasure of their parents and the jibes of their sex. If the man be false to his word, and the woman commits suicide, he is held responsible for the value of her life, and is very heavily fined. It is unusual, however, for the men to prove false to their vows. It is absolutely necessary for them to marry as early in life as possible, and if a suitable woman is already found, and her fertility ascertained beyond a doubt, there is no inducement to hang back. The young men as a rule marry at 18, and settle down, and the girls at 16.

Presents given to a girl during courtship can never be recovered whatever the event.

Match-making parents sometimes invite a likely young lad of their acquaintance to *ngaiap* (as it is called) their daughter while both are yet young; they do all they can to render his visits agreeable to him in the hope that he may learn to get fond of the girl and take her to wife when they are both old enough to think of such matters. When the young man has made sure of his bride, he asks the important question of the parents. Should they be willing the day is fixed, and all in the house are invited to eat *pudang sirih*. Should the young man live in another house the women in the house dress themselves

in their best to go and fetch the bride. Then comes the tug of war; shall they run the gauntlet of all the young men and boys of the house, who are waiting with sooted hands to begrime their faces and bodies? They generally show fight, although they come away like niggers, for the boys are full of mischief.

When a young woman is in love with a man who is not acceptable to her parents, there is an old custom called *nunghup bui*, which permits him to carry her off to his own village. She will meet him by arrangement at the water-side, and step into his boat with a paddle in her hand, and both will pull away as fast as they can. If pursued he will stop every now and then to deposit some article of value on the bank, such as a gun, a jar, or a *tavor* for the acceptance of her family, and when he has exhausted his resources he will leave his own sword. When the pursuers observe this they will cease to follow, knowing he is cleared out. As soon as he reaches his own village he tidies up the house and spreads the mats, and when his pursuers arrive he gives them food to eat and toddy to drink, and sends them home satisfied. In the meanwhile he is left in possession of his wife.

When laughing and joking with the girls, it is no offence to catch them round the waist and squeeze their breasts, but it is out of the question to act in this manner with a married woman; anyone venturing to squeeze the latter even in ignorance of her condition renders himself liable to a fine of from five to eight *mungkuls*, and if anyone venture to disturb her in her curtains with ever so innocent an intention he subjects himself to a penalty.

The women, as a rule, are faithful to their husbands, and adultery is uncommon when we consider the density of the population. If a woman commit adultery with a husband his wife may fine that woman whoever she may be, or if she prefer it she may waylay her on the ground and thrash her; but if she does this she must forego one-half the fine she would otherwise be entitled to demand. If her husband deserts her she may fine him or require him to provide for her children. If he forsake her in order to marry some other person, she has a right to fine her rival in his affection for enticing him away from her. If either wish to separate from the other and there is no issue to the marriage, nothing is simpler; it is merely necessary to allege a bad dream or adverse omen, and both are free to marry again; but if the dream or omen be a reality, and the pair are not desirous of parting company, they can avert any evil consequences from neglecting to do so by sacrificing a pig.

Young couples often part in anger for a few weeks or a few months, as the case may be, and come together again when the

storm has blown over. People are often married twice or three times before they find their partner for life. As the women do a fair share of work they are entitled to receive upon divorce one-half of the property acquired during coverture by their joint labour. Divorce is the reverse of common after a child has been born, but frequent enough before the event. The women fully understand the value of a husband and are careful to keep him in good humour, especially when there are extra mouths to feed. No divorce is absolute until the property has been divided and a ring given by the man to the woman as a token of her freedom to marry elsewhere.

Polyandry is unknown; clear cases of bigamy are of rare occurrence and not tolerated. No Dyak can have more than one wife at a time.

When a wife loses her husband by death she cannot marry again (except by a special payment) until she has performed the last rites required by custom at the *Gawai Antu* (spirit feast). If she do she is fined by the relatives of the deceased, for this is a slight upon his memory. The amount of fine is just the same as if he were still alive and she had abandoned him for another; and her new husband is fined at the same time for seduction. The fact is, a widow is regarded as belonging to her deceased husband until she is formally freed from him by the feast of the *Sungkup*. She is obliged to lead a virtuous life as long as she is in mourning or abide the consequences, which are severe in their nature, and involve her lover as well as herself (see p. 122).

Suicide is of frequent occurrence among the females, but is rarely resorted to by the males. The women, as we have said before, are so keenly sensitive of disgrace that many prefer, if anything untoward happen, to perish by their own act. They cannot bear to be found fault with by those whom they love, and if reproached by their parents or their husbands in at all bitter terms for any irregularity in their conduct, they take poison; but the doses do not always prove fatal, and if a powerful emetic is administered in time death does not ensue. Fowl's dung is forced into their mouth to produce nausea, and the body is immersed in water. There is a hill in Sabaian (the next world), says tradition, covered with *tuba*, and suicides there enjoy undisturbed repose beneath the shade of the poisonous shrub. Despairing lovers, whose union upon earth was forbidden by harsh and unfeeling parents, are here reunited. Women have also been known within recent times to commit suicide to avoid the shame and disgrace of being sold into slavery.

Infanticide is occasionally practised to destroy the offspring

of shame. Also if a mother died in child-birth it was the former practice to strap the living babe to its dead mother and bury them both together. "Why should it live?" say they, "It has been the death of its mother, and now she is gone who is to suckle it?" It is now the custom to give it away to anyone who can be found to adopt it. If there be no one to take care of it, it is allowed to perish from want of nourishment.

The Sea Dyaks are very particular as to their prohibited degrees of marriage, and are opposed in principle to the inter-marriage of relatives. This is one reason for the fertility of their women as compared with other tribes who are fast vanishing around them. As with us, a man may not marry his mother,

Nor his step-mother,
Nor his mother-in-law,
Nor his daughter,
Nor his step-daughter,
Nor his daughter-in-law,
Nor his adopted daughter,
Nor his sister,
Nor his step-sister,
Nor his half-sister,
Nor his wife's sister,
Nor his aunt,
Nor his step-mother,
Nor his father's sister,
Nor his mother's sister.

He may not marry his first cousin, except he perform a special act called *bergaput*, to avert evil consequences to the land. The couple adjourn to the water-side and fill a small earthenware jar with their personal ornaments; this they sink in the river, or instead of a jar they may fling a *duku* (chopper) and a plate into the river. A pig is then sacrificed on the bank and its carcase, drained of its blood, is flung in after the jar. The pair are then pushed into the water by their friends and ordered to bathe together. A joint of bamboo is then filled with pig's blood, and they have to perambulate the country, scattering it upon the ground and in the villages round about. They are then free to marry (see p. 114).

The women suffer very little at their confinement, and seldom remain quiet beyond a few days. They are very anxious for children, and if there is a preference it is decidedly for males, though females are treated quite as well. During pregnancy and until delivery the husband is prohibited from doing a great many things; he may not work with any edged

tool except it be absolutely unavoidable; he may not tie things together with canes, nor kill certain animals, nor fire guns, nor do anything, in fact, of a violent character; all such things being supposed to exercise a malign influence on the formation and development of the *fœtus*.

A few months after the birth of a child a feast is given in honour of the event, and another after the harvest, to launch it on the world. During the feast the *manang* waves the odorous areca blossom over the babe and moves about the village chanting. The feast lasts a day and a night.

It is usual for the husband to reside with the father-in-law until he has a family of his own and is prepared to set up a house for himself. If his wife is the only daughter and he is permitted to take her away to his own home, her parents have a right to demand of him a *taju* or *brian* (*barian*) to replace her loss of service; but if she has a sister or sister-in-law to attend to her parents, no such demand can be made, and she is at liberty to follow her husband if she be so disposed.

Self interest governs the father in connection with his daughter's marriage. He makes certain requisitions as the price of his consent. He would stipulate that his daughter should continue to live with him or near him so that her children should belong to him as head of the family group. In this case not only would the children form part of the family to which the mother belonged, but the husband himself would become united to it, and would be required to labour for the benefit of his father-in-law. It frequently happens that when a husband refuses to live with his wife's family she will leave him and go back to her relatives.

It is customary to treat a father-in-law with even greater deference than one's own father. The son-in-law will never venture to utter his name or to contradict him when speaking. He may not lie on the same mat with him, or eat off the same plate, or drink out of the same cup, or walk in front of him.

[N.B.—*Further papers will follow.*]

DISCUSSION.

Dr. TYLOR said that when the rough notes of descriptive anthropology, which Mr. Brooke Low did not live to complete, were placed in his hands by his father, Sir Hugh Low, their fragmentary and half-obliterated state seemed hopeless. But on examination it was evident that material of so much value must, if possible, be saved, and at his request Mr. Ling Roth had undertaken to bring the papers into shape, and deserved the thanks of the Institute for

the skill and patience with which he was accomplishing the task without substantial alteration, and generally without changing the writer's words. The present paper, the first instalment of the whole, shows Mr. Low's skill both as an anthropologist and as a philologist, whose linguistic studies in the Dyak region, which from his official position in Sarawak he knew intimately, add largely to our knowledge of a group of languages as yet but scantily known. Among the topics to which Dr. Tylor wished to call special attention, are the remarks on the relation of dreams to the idea of soul or spirit, a fundamental doctrine of the animistic scheme of religion. No illustration could be stronger than that of the Dyak, who, having dreamt that he fell into the water, attributes this to his shadow-soul having really fallen into the water, and proceeds, by the aid of the spirit-doctor, to recover it, and get it restored to him. In the description of omens, the animistic reason for animals giving intelligence by omens is supplied where it is mentioned that such spirits of birds are considered to be really transmigrated ancestors come to warn the Dyaks of danger. This throws an important light on what we call ill-omened birds and other creatures, who from this point of view are not vexatious, but come as friends to save their friends from harm. It appears that the Dyaks share with the Kafirs of South Africa the delusion that the lengths of shadows vary, portending good or ill. Among other doctrines familiar to students of the lower culture, here well illustrated, may be observed the tabu, here known as *mali* (given by St. John in the form *pamali*); the totem-animal, whose flesh may not be eaten; the tree-spirit, consenting or objecting to its tree being felled; the accounting for bad weather by the anger of the spirits at marriage-customs having been violated, &c. Care must, however, be taken not to overlook the effects of foreign civilized influence on the ideas of these rude people. The mystic number seven, as in the doctrine of the seven spirits, must be due to Hindu or Moslem influence; as also the worship of the deity called here the Great Spirit, whose name, probably showing in which of these two cultured religions he originated, will, no doubt, be specified in papers to come later on before the Institute.

Dr. CODRINGTON said that very much of what had been read, especially in the first part, corresponded closely with what had been observed in Melanesia. Without referring to general resemblance or identity, three words had struck him as remarkable: 1. *Antu*, no doubt the Polynesian *atua*, a spiritual being or demon; 2. *Manang*, probably the *mana*, by which all magic and doctoring is worked in Melanesia; 3. *Tapu*. (This last, however, was introduced in the paper, not as a native word, but as generally understood.)

Sir HUGH LOW said:—In reference to the points in this paper in which Dr. Codrington has remarked similarity to the customs of the natives of the Islands of Polynesia, I should like to mention that, although it is now more than forty years since I had the opportunity

of travelling among the Dyaks of Western Borneo, to whom the notes left by my late son refers, I distinctly remember the importance attached to the omens derived from the flight of birds and the position from which the notes of birds and of various insects reached them. The omens also derived from the examination of the viscera of the pigs which are killed for the festivals held on all important occasions are most carefully observed, and no feast which I have attended was commenced until after a fowl had been killed, the blood mingled with rice stained yellow with turmeric, and thrown up towards heaven by the chief, who at the same time offered a prayer, the words of which were not understood by the people.

"Taboo" is much practised among the Dyaks. At the time of planting the seed in the padi fields, no stranger may enter there for several days. The public path frequently passes through them, but during the "taboo," or, as the Dyaks call it, "pamali," a detour must be made to avoid the forbidden enclosure. The existence of the pamali is made known to everyone by dried palm leaves or small branches of bamboo or shrubs placed in a conspicuous position at all the entrances of the forbidden farm. The same practice is used when sickness is in the house, and for the preservation of fruit trees and of anything which it is desired should not be interfered with by the general public. If a Dyak is asked to do anything contrary to custom, he invariably answers, it is "pamali." These remarks refer more particularly to the Land Dyaks of Western Borneo, but are, I believe, equally applicable to the Sea Dyaks, to whom my son's notes more particularly refer.

The *manang*, or medicine man, is of great influence in every tribe, and amongst the Sea Dyaks they have the curious custom of dressing as women, and in all their actions endeavouring to imitate the manners and customs of the female sex; even to the taking to themselves men who are called and pass among the people as their "husbands." The belief in magic is very prevalent among all the natives I have observed in Borneo and the Malay Peninsula, and it has even survived the introduction of the religion of Islam. The magic practices derived from the wild Sakie of the Peninsula are held in great esteem among the Malays of Perak, though discountenanced by the Mahomedan priests. Charms similar to those so widely used in Borneo are in use also among the even less cultivated Sakies and Semangs of the Malay States, and consist of the same articles, such as abnormal growths, nodules of plants, stones of unusual appearance, beads, teeth, and other articles. These often form a bundle of two or three pounds' weight, and on occasions of unusual importance, as in exploring an unknown district or ascending a high mountain, are suspended round the neck.

The tiger, though not an inhabitant of Borneo, is, as a mythical animal, held in great reverence by all the tribes—the largest cat in the island is that which is, I believe, called "*Felix macrocelis*," by Dutch authors, but I have heard that a skull of what was

believed to be a tiger was shown in the village of the Singhie Dyaks in Sarawak, black and decaying from age; but Mr. Everett, who observed it, was not allowed to handle or even approach it very closely, and was consequently unable positively to identify it.

Mr. COUTTS TROTIER called attention to the wide area on the opposite mainland of Asia, extending up through Siam to Tibet, &c., where we find not only the identical customs first described, but also the same habits of thought and beliefs of which these customs are the outcome; their prevalence in these countries depending, inversely, on the extent to which Buddhism has established itself. This is the official creed everywhere, but in the country districts exists only as a slight veneer, the real popular faith being still that which these customs represent.

Prof. T. RUPERT JONES, replying to the President's enquiry as to the geological nature of some of the specimens exhibited, stated that the two so-called "gall-stones" are smooth pebbles of banded lydite (solid siliceous schist); and that the octagonal plate consists of an igneous rock (trap-rock), such as coarse-grained diorite or gabbro, composed of felspar and augite.

MAY 12TH, 1891.

EDWARD B. TYLOR, Esq., D.C.L., F.R.S., *President, in the Chair.*

The Minutes of the last meeting were read and signed.

The following presents were announced, and thanks voted to the respective donors:—

FOR THE LIBRARY.

- From the AUTHOR.—The Scientific Measurement of Children. By the Rev. H. A. Soames. 8vo. London, 1891.
- Étude sur l'éthnographie générale de la Tunisie. By Dr. René Collignon. 8vo. Paris, 1887.
- Note sur les crânes de Cumières (Meuse) Époque Néolithique. By Dr. René Collignon. 8vo. Paris, 1883.
- Les Ages de la Pierre en Tunisie. By Dr. René Collignon. 8vo. Paris, 1887.
- La Race Lorraine. By Dr. René Collignon. 8vo. Nancy, 1881.
- L'Angle facial de Cuvier. By Dr. René Collignon. 8vo. Paris, 1886.
- La Nomenclature quinaire de l'indice nasal du vivant. By Dr. René Collignon. 8vo. Paris, 1887.

- From the AUTHOR.—Répartition de la couleur des yeux et des cheveux chez les Tunisiens sédentaires. By Dr. René Collignon. 8vo. Paris, 1888.
- L'Inscription de Temia. By Dr. René Collignon. 8vo. Paris, 1888.
- Les principales races de France. By Dr. René Collignon. 8vo. Paris, 1883.
- Description de cranes et ossements préhistoriques et de cranes de l'époque Mérovingienne trouvés en Alsace. By Dr. René Collignon. 8vo. Colmar, 1882.
- From Dr. RENÉ COLLIGNON.—La couleur des yeux et des cheveux chez les Aïnos. By H. Lefèvre and Dr. Collignon. 8vo. Paris, 1889.
- Notice sur la découverte de squelettes humains dans le lehm de Bollwiller (Haut-Rhin). By J. Delbos. 8vo. Paris, 1879.
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Mr. CHARLES H. READ read a Paper on the Origin and Sacred Character of certain Forms of Ornament in the South-East Pacific.

Mr. H. H. HOWORTH and the PRESIDENT joined in the discussion.

*On the ORIGIN and SACRED CHARACTER of certain ORNAMENTS
of the S.E. PACIFIC.*

By CHARLES H. READ, F.S.A.

[WITH PLATES XII TO XIV.]

THE Directors of the London Missionary Society, after due consideration, last year decided to accept the suggestion that had been made to them, to transfer to the custody of the Trustees of the British Museum the most important and valuable section of the interesting museum that they had gradually accumulated during the last hundred years at their well-known house in Blomfield Street. The section I refer to is that formed by the pioneers of the Society, Ellis, Williams, Tyerman, Bennet, and others, during their residence among the islands of the Eastern Pacific. It is scarcely possible to exaggerate the ethnological importance of these specimens, an importance due in the first place to their intrinsic merits, and in the second to the fact that at the time they were obtained the religions and habits of the natives had been but little disturbed by European influence.

The Directors of the Society not unnaturally hesitated in parting with objects which were, in a sense, landmarks in their history, and connected with the missionary successes of some of their most distinguished workers, but they were finally influenced by the greater public utility of the collection when in the British Museum, where it can readily be seen and studied by anyone interested, whereas in the heart of the City it was to a great extent isolated, though the museum was by no means unknown, and for its scientific value was frequently visited by foreigners.

An ethnographical museum, however, requires constant care for its proper preservation, and this it is only likely to obtain where the custody of the specimens is a principal object of the institution. Obviously the officers of the London Missionary Society have other and more important duties than keeping watch over the condition of the specimens liable to deterioration

in their museum, and the museum thus took a distinctly secondary place. For these reasons I think the transfer of the most important specimens to the British Museum was a wisemeasure.

Though many of the chief Polynesian objects in the Missionary Museum have been described and figured at various times and in various publications, I still thought material enough could be found to make a communication of some interest to lay before the Institute, and I had intended to give a somewhat particular account of the specimens now in the British Museum. I found, however, that the range was so vast that the limits of a paper in the *Journal* would soon be exceeded, and it therefore seemed best to take a section at a time, to include some particular class of objects, and acting on this principle I selected some of the so-called "gods" to make a beginning. In studying the forms and construction of these, I have been led to include at the same time a variety of objects which seem to me to form a fairly continuous chain, though some of the links may seem feeble, and others, perhaps, have yet to be found.

While setting in order the results of my investigations in this matter, I received from my friend Dr. Hjalmar Stolpe, of Stockholm, an elaborately illustrated paper published by him in the Swedish journal *Ymer*, and to my surprise I found that he had been engaged in pursuing precisely the same line as myself, and with nearly the same results. Though I should not have been at the pains to pursue this investigation had I known of Dr. Stolpe's work in time, yet the Swedish language is not so universally understood as to render it quite useless for me to lay the results of my independent investigations before the Institute.

As an introduction to the main subject, I have put together a few notes upon certain objects that have relation to the matter that follows, and so far as I know, my views have the merit of novelty.

In Plate XII is a series of fourteen figures. Fig. 1 is a side view of a canoe ornament, the rest, excepting Nos. 12 to 14, are the handles of fans or hand-screens, chiefly wanting the fan, the absence of which I will explain later. This series is drawn from actual examples from the Missionary Museum, and illustrates in a very complete manner the degradation of an ornamental group of human figures into a mere conventional symbol. A similar instance of degradation has been published in our *Journal*, vol. iv, p. 72, by General Pitt-Rivers, as occurring in the Western Pacific, but I think I may claim greater completeness for the series now before you, as at one end of the chain the art is of a much higher rank, and at the other

the disappearance of all meaning is more absolute; and in addition to this, the evidence I can bring forward strengthens my argument, referring as it does in some cases to the individual specimens used in the series.

Fig. 1 is a carved ornament from Huahine used to fix to the end of the canoe, the two figures being representations of gods. It is identical in design with Fig. 6 in Ellis' frontispiece, which "exhibits a sacred ornament of a canoe from the island of Huahine. The two figures at the top are images worshipped by fishermen, or those frequenting the sea." (*"Polynesian Researches,"* vol. ii, p. 221.) I have introduced this piece, perhaps unnecessarily, because even to an eye utterly unfamiliar with savage art there can be no question that these are without doubt two human figures, seated back to back, at some little distance apart. In Figs. 2 and 3 the figures still maintain their human aspect, though they are placed close together, for greater convenience in their position as ornamental handles. In Fig. 3, however, the heads are joined, there is a greater roundness in the limbs and contours, and what is very important, the arms are represented as having wavy edges; the feet also rest upon two projections which reappear upon the later and simpler forms (Figs. 9, 10). Fig. 4 is highly conventional, and possesses scarcely any human character, the heads being little more than projecting knobs, the arms in the same rudimentary style, while the legs become purely ornamental, in the form of two beaded crescents back to back. In Fig. 5 we come to a very distinct step in the descent. All semblance of humanity has disappeared, and nothing remains but the purely decorative elements of the design, in fact a mere ideograph. It will be observed that the whole is formed of beaded lines, the premonitory symptoms of which we saw in the arms of Fig. 3 and the legs of Fig. 4; the two heads of the figures are, however, reduced to a gable-like form, placed above a similar but larger gable, representing the arms, and the opening between the backs of the figures is a mere oval. In the next example, Fig. 6, the descent is fully as well marked. The two bodies are represented by a lozenge shape with an oval opening in the middle, the heads, arms, and legs are on the same principle as the last, but greatly diminished in size and prominence. Fig. 7 has lost the lozenge form, a characteristic of Tahitian artistic anatomy, and assumes an oval outline, with a circular opening in the middle, but all suggestion of the legs of the figures has disappeared, and the heads and arms are reduced to a single beaded gable. The following specimen, Fig. 8, is even further simplified, the gable is no longer beaded, the oval form is lengthened and becomes more graceful.

though the circular hole in the middle still remains. In Fig. 9 the hole has disappeared, and a curious change takes place in the gable, which here is placed as a short rib on the two faces of the point, instead of resting upon the edge; and we note here also the reappearance of the two projections on the stem. Fig. 10 shows the simplest form, where no trace remains of the human figures from which it has been evolved, and this practically closes the series, Fig. 11 being only introduced to show the simple form in place as the handle of a fan.

One inherent defect in many theories of the development of forms of primitive instruments and deviation, is that a good deal has to be assumed before the theory will bear criticism, and a second defect, less radical perhaps, is that the series of progressive stages can be traced equally well from both ends, that is, that it is impossible to say, from internal evidence, whether it is a case of development or degradation. I think there can be no such questions about the example I have brought before you this evening, and I take it to be an undoubted case of the degradation of form. It is but logical to assume that, as the practical utility of an object precedes its ornate or decorated form, so the first promptings of art instinct are towards realistic delineations. These perfected, so far as the powers of the artist will admit, conventionalism becomes possible. This is the more likely to occur, when, as in the present instance, the objects represented are in universal demand and have to be produced in large numbers. The artist would unconsciously lean towards a kind of generalisation of details, which by saving his time would enable him to produce more, and naturally at a cheaper rate.

There are other points of interest connected with this series, having an important bearing upon my immediate purpose, and to which I will now call your attention. It will be observed that nearly all of the fan handles have a binding of sinnet or tapa round the shaft, and that into this binding, feathers, human hair, or rough cocoanut fibre are interwoven. This binding and the presence of the feathers is fully explained by Ellis, who says:—

“Throughout Polynesia, the ordinary medium of communicating or extending supernatural powers, was the red feather of a small bird found in many of the islands, and the beautiful long tail feathers of the *tropic* or man-of-war bird. For these feathers the gods were supposed to have a strong predilection; they were the most valuable offerings that could be presented; to them the power or influence of the god was imparted, and through them transferred to the objects to which they might be attached.” [Then follows a description of the *modus operandi*

of imparting special sacred value to the feathers.] Ellis, ii, p. 204.

It is evident therefore that all these objects have a sacred character, due to the addition of the feathers and other trappings, and apart from their form and special use as fans. Only one of all the series has any history, *i.e.*, Fig. 4, and this is described in the printed catalogue of the Missionary Museum under No. 47 as a "sacred fan with which the priests drove away flies at the human sacrifices—Marquesas Islands." The style of the carving would lead me rather to attribute it to the islands immediately south of the Tahitian group than to the Marquesas, where a very distinctive style prevails.¹ The account of its use, however, seems more probable, as it is, I think, quite clear that these fans and fan handles had a religious significance. This opinion is further confirmed by the description of Fig. 12 in my series, to which I have not hitherto alluded. The description is written upon the object itself as follows:—"Called a To, a thing worshipped in all the islands." It is a simple piece of wood of precisely the same outline as the end of the fan handle next to it, but in section somewhat thicker; and I take this as strong confirmation of my theory with regard to these objects, which briefly stated is, that the simple elongated fan handle represented in Fig. 11 is a direct descendant of the type of human figures represented by Fig. 1, and that in all probability both objects conveyed the same idea to the mind of a native of these islands.

The two paddle-shaped objects (Figs. 13 and 14), are described in the L.M.S. catalogue as "55. Two large paddle-shaped idols with fibre rope attached."

They are formed of hard wood very much weathered, and have all the appearance of great age, though this may be only the result of exposure to the weather. If, however, they have been much exposed, it can only have been before the elaborate binding of sinnet was put on, for this part of the idol is in a perfect state of preservation. The presumption therefore is, of the two, rather in favour of their antiquity.

The mode of wrapping is that described by Ellis as most

¹ The fans in use in the Marquesas Islands are essentially the same as those of Tahiti and the islands to the south; and one of them is included in the Missionary collection. The handle, as well as the blade, is of the same form, that is, the latter is roughly triangular and of plaited strips of leaf, while the former is in the shape of two figures back to back. The Marquesan variety might therefore have well been included in this series; but that I have tried to restrict my examples to the narrowest limits possible, in the belief that by this they gain in force, while it clearly shortened my labour. Moreover, in the Marquesas a style of art has been developed, strongly differentiated from that of any other Pacific group, and the resemblances can only be traced in the general composition or structure.

characteristic of Tahitian gods (*op. cit.* ii, p. 220), which are generally shapeless staves or flat knife-like pieces of wood. From the certainty that they are idols, I have introduced them as having an obvious bearing upon the series. Their large size would render possible their actual use as clubs, though this does not affect the question. If, however, evidence could be brought to connect them with the fan handles, as representing to the native mind the same religious idea, it would be worth considering whether the familiar spatulate clubs so familiar in Tonga and Samoa are not members of the same family. Many of these clubs have special well-defined forms, repeated *ad infinitum*, and it would be satisfactory if a stronger reason than mere habit could be adduced to account for this absence of variety. I have refrained from insisting upon this point, seeing that the premises want much study and comparison before anything like certainty can be arrived at; but it would, if proved, form another small link in the chain of Polynesian migrations, about which we have still so much to learn.

Plate XIV exhibits the steps of degradation of a common and not very complex form of decoration constantly found upon the implements of Mangaia and the adjacent islands, and more particularly upon the handles of the elaborate adzes for which Mangaia is famous.

I can imagine that to those to whom this series is quite novel the conclusion at which I arrive, *i.e.*, that a continuous and connected chain exists between the two ends of my set of examples, may seem somewhat strained. In support of my proposition generally, however, I would submit two arguments. The first is the somewhat trite but no less important axiom, that all primitive ornament of which we know anything, is founded upon some real necessity for its presence, although with the passage of time the original necessity may disappear entirely. The most familiar example of this gradual change of type is, I think, also the most forcible, *viz.*, that of the design of the ancient British coin, debased from a fine Greek profile into an unmeaning series of dots and lines which can barely be called ornamental, a change due only to a persistent copying of copies. Originally, no doubt, the head of Apollo was regarded as an essential and necessary part of the coin, but there can be little question that the artist who designed the last of the British coins of this type had but a slender idea of the original intention of his design. My second argument is of more special application, and is briefly that the more prominent of the objects upon which this class of decoration is found, are in themselves of a sacred character, and that, for this reason, the derivation of the most conventional portion of the ornament

from the figure of a god has, *prima facie*, a degree of probability. This, no doubt, applies equally well to my first series, shown in Plate XII, but in that case I could not call so strong a witness in my favour. The Rev. W. Wyatt Gill, in his "Jottings in the South Pacific," in speaking of the Mangaian adzes, says, "The carving, which is often admirable, was formerly executed with sharks' teeth, and was previously intended for the adorning of their gods. The fine pointed pattern is known as the sharks' teeth pattern (*nio mango*). Other figures are each supposed, by a stretch of imagination, to represent a man squatting down. Some patterns are of recent introduction, and being mere imitations of European designs, are destitute of the significance which invariably attached to ancient Polynesian carving. The large square holes are known as 'eel borings' (*ai tuna*), the lateral openings are naturally enough called clefts. To carve was the employment of sacred men."

This statement by Mr. Gill, an acute observer, to whom we owe so much of our knowledge of the arts and mythology of Polynesia, is of the greatest interest, and demonstrates conclusively the sacred character of the ornament; and I will now ask you to perform the stretch of imagination referred to by him.

Fig. 1 is the head of a long, beautifully finished staff of hard wood from the Hervey Group, representing in what is intended to be a realistic manner, two squatting human figures. The view given only shows one figure, the two being placed back to back in the usual manner. Fig. 2 follows somewhat abruptly, and I am conscious of a missing link that might have preceded it with advantage. It is a very ancient possession of the British Museum, and may have been one of Captain Cook's collection, but it is entirely without history. In type and material (the wood of the bread-fruit) it corresponds with other figures from Tahiti. The head, it will be seen, is represented by a rude disc horizontally placed upon the body, and supported by the hands—an attitude seen in the figure of Tii Vahine. The squatting legs have a characteristic and peculiar bend outwards from the hips, while the trunk is almost uniform and very round.

The next figure is very similar in detail, and is a representation of the end view of the openwork pedestal of Fig. 1 on Plate XII. The view there given shows no indication of the figures at the ends, so conventional is the style, but it stands out fairly clear when seen from the end and in connection with Fig. 2. In passing to the next figure I am again conscious of a slight want of continuity, but here the change of method is accounted for to some extent by the fact that we now pass from what may be called sculpture in the round to surface decoration, Figs. 4 and

5 being single figures from the rich ornament of two of the three gods in the Missionary Museum, an example of which forms Fig. H of my third diagram. These are district gods of Mangaia, but their names have been lost. The flat slabs which represent the head and feet of the figure in Fig. 3 are here divided into two by a vertical line, the arms and legs are each formed of a broad arrow pointing up and down, while the body sinks into a simple ridge. In Fig. 5 the same type is maintained, the principal variations being the engraving upon the oblongs forming the head and feet (resembling Fig. 11), and the disappearance of the lower broad arrow to represent the legs, while the whole figure is curved. In Fig. 6 the same essentials of the design are preserved, but again with variations, and this applies also to Fig. 7. The rosette which forms the head of Fig. 6 is commonly found upon the paddles and other utensils of High Island (Raivavai) and rarely if ever upon the Mangaian adzes. Fig. 6 is one of a ring of similar projections upon an object the use of which is unknown to me, while Fig. 7 is a similar, but much larger, projection upon the side of the drum (Fig. N, Plate XIV), figured in Ellis, vol. i, p. 282. Fig. 9 represents one of a number of figures carved in relief upon the upper side of a long box from the island of Huahine, brought thence by Mr. George Bennet, and formerly in the museum at Sheffield. These small figures form a very valuable link in the series, though of a very rudimentary style. The head is a plain disc, like Figs. 6 and 7, but without the central hole; the trunk resembles Fig. 3 in coming to a horizontal edge across the body, while the legs and feet are indicated by an oblong block left in relief, the middle part of which has been cut away, thus leaving a square projection for each foot, the principle more clearly seen in Figs. 4 and 10. Fig. 8 I have introduced in this place only to show the same mode of representing the head as is seen in Fig. 7, and the design is found upon the edge of a Tahitian seat (*papahia*), probably the example figured in Ellis, vol. ii, p. 181.

Figs. 10 and 11 bring us to the characteristic ornament of the Mangaian adze handles, which at this particular phase may be called the K pattern, as a figure resembling this letter is its principal feature. In Fig. 10 the K is seen sideways, the straight stroke being the head of the fast disappearing human figure, while the feet are indicated by two squares as in Fig. 4. From this point the series is composed of variants of the K pattern, sometimes placed vertically, at others horizontally, both positions being found upon the same specimen, as for instance, Figs. 11 and 12, which with Fig. 13, occur upon an adze handle in the Christy Collection, and in the diagram I have preserved their relative positions. Fig. 11 is the last

relic of the human form, as indicated by the division at the bottom to represent the feet. In Figs. 12 and 14, the design is placed at right angles to the last, that is, the K is upright, not sideways, and the differences between the two are but slight, Fig. 12, being strictly geometrical, while Fig. 14 has some of its members rounded.

Fig. 13 forms in a sense the concluding design, and I think the connection between it and those immediately preceding will not require much demonstration. The inside of each square is divided into two equal portions, shelving downwards into the two corners from the ridge across the middle, this ridge being vertical in one row and horizontal in the next. These squares are of course formed by continuing the angular lines forming the back of the K until they meet, and eliminating altogether the upright line, which would form a disturbing element in repeating the design over a large surface.

The remaining figures (15 and 16) are designed to show how by a somewhat different road the same K pattern descends into a simple zigzag. Taking again Fig. 12 and placing it with its ridge line vertical (like Fig. 11), it is only necessary to repeat the same figure several times and it becomes Fig. 13, and of this Fig. 15 is but a slightly varied form. Fig. 16 is part of the decoration of a very pretty kava cup from the Hervey Group, and in the lowest line of the ornament I think I find, in another form, degraded into a mere zigzag, in fact, the elements of the K pattern.

It is possible that the evidence I have been able to bring forward may seem in places somewhat scanty, and that if the case rested only upon the examples before you, it might result in a verdict of "not proven"; yet, when fortified by the statement of Mr. Gill, that the ornament in question is "supposed by a stretch of imagination to represent a man squatting down," and that the carving and the carvers are both sacred, it assumes, I think, a different aspect.

The third and concluding section of my subject deals with the representations of the gods of the same part of the Pacific, and of these interesting relics we can now show at the British Museum a series, I think, quite unparalleled, and in great part derived from the Museum of the London Missionary Society. I do not, however, propose to deal with the whole of them on this occasion. The first figure is one of which we are fortunate enough to have the history. It is the Tahitian goddess Tii Vahine,¹ obtained in the island by Mr. G. Bennet, as described

¹ This name is somewhat puzzling, for *Tii* is no doubt connected with the Maori *Tiki*, by which a *man* would seem to be meant, while *Vahine*, without doubt, means a woman

in Tyerman and Bennet's "Journal," ii, 58 :—"Mr. Bennet obtained [in Tahiti] a *fare na atua*, or house of a god, the only relic of the kind that we have seen in these islands, so utter was the demolition of such things even when the idols themselves were preserved for transportation to England. . . . This shrine was wrought out of one solid block of timber; in form it resembled a dwelling house, with roof and sloping ends, and was three feet in length. Underneath there was a cylindrical hole, having a door which closely fitted the opening. This was the depository of the idol. The fabric was supported on four short legs resembling those of a tortoise. The idol itself was of great antiquity, a female fiend, hideously misshapen, to mimic humanity. Her name was Tii Vahine, and we were told that she had slain her thousands, having been held in the highest veneration, and worshipped from time immemorial." The original is very small, only four inches in height, but well carved, and I take it to be typical of Tahitian sculpture of the human form. Its general features are so well marked as to need little description, and I would only call attention to the profile in front, as it is this outline that will be found to recur in somewhat varied form throughout the series. (Plate XIV.)

In Plate XIII, Fig. A, is a representation of Tangaroa, the great Polynesian god, a well-known example from its being one of the figures of the frontispiece to Ellis. The great Tangaroa which forms the principal figure in Ellis's plate is also in the British Museum, and though it is one of the most remarkable monuments of Polynesian idolatry, it is too realistic in style to enter into my series. The more conventional form of this Jupiter of the Pacific which you have before you is a very cryptic character, and I do not pretend to explain its full meaning, though it is clear enough in parts. As may be seen, it is in the shape of a bat, the blade of which is pierced symmetrically, the middle being of a pointed oval form; within this oval are four openings and two bosses, outside are other openings, bringing into clearer relief the outer border, which is entirely composed of human figures of the same type as Tii Vahine. At the top is one full face, flanked by two others, facing outwards, below this again on each side is another figure, whose feet rest upon those of a third figure, head downwards, the oval being completed by a fourth at the bottom. The interpretation of the middle part is beyond my powers, though that its form and details are full of significance, I have not a doubt.

It may appear at first sight that the relation between this figure and Plate XIV, Fig. C, is somewhat distant, but a closer

examination will show that they are near kin. Fig. C is composed of six ribs radiating from a common centre, and each rib is formed of human figures, the two lower ones feet to feet, the lowest row being head downwards. (The design is somewhat hidden in the original by the wrappings of sinnet rope and feathers, absent in the figure.) Each of these ribs is therefore practically the same in design as the edges of Fig. A, the chief difference is in the number of these edges or ribs, being six in Fig. C, instead of two as in Fig. A. This god is stated in the Missionary Museum Catalogue to be "Taringarue, the superior god of Atiu," and further that this and a bundle of sinnet and feathers "are but portions of the god; the rats having made a nest in him, destroyed the remainder"—a very satisfactory proof of his impotence. Atiu (= Wateoo) is an island in lat. $19^{\circ} 58'$ S., long. $158^{\circ} 6'$ W., one of the Hervey Group.

Fig. D is of the same construction as the last, but of more slender build; the figures of the god are more conventional, and it differs greatly in the form of the upper end. A specimen similar to this is figured in Ellis' plate (Fig. 4), and, though not specially mentioned in the text, is stated to be a god "from the Hervey Islands" (p. 221). The example here drawn would seem to be one of those described in the Missionary Catalogue as idols from Metiaro, an island 25 miles from Atiu ($20^{\circ} 1'$ S. lat., $157^{\circ} 34'$ W. long.).

Fig. E on the same plate represents the upper portion of another idol of similar design, but provided with only four ribs down the sides instead of six. The chief difference between the two is the absence in Fig. E of the central pillar in the head.

In these the heads and arms of the figures remain as in Fig. A, but the body has become angular, and the legs and feet are replaced by another head and arms reversed. The peculiar form of the upper part I will refer to later in dealing with the concluding examples of this series.

Figs. F and G are somewhat foreign in style, and being so it would possibly have been better to keep them out of the series altogether, as they scarcely add to its strength, and may possibly introduce an element of confusion. They seem to me, however, to be derived from the same elements, and I have therefore interpreted them at this stage.

From their rude make I should judge them to come from Tahiti, and not from the Hervey or Austral Groups, the natives of which were far more expert in carving than were those of Tahiti (Ellis, i, p. 372). That they differ in style is, however, obvious, and the fact of their belonging to one of the more

distant islands of the group would account for this difference as well as for certain other variations in detail. Taken together it will be seen that they have in common with the rest of the group, and with each other, the loops, which are the remains of the figures. In Fig. G these still bear a resemblance to Fig. C, while in Fig. F the loops are broken, and the likeness to the prototype is almost gone. In Fig. F we find, in addition to the broken loops, a number of faces and even figures of a fairly naturalistic style, and in this respect it differs from all the rest, as indeed it does also in size, being eight feet in length, and further encumbered with a string of large sea-shells tied to a coarse rope of sinnet. Fig. G I take to be the end of the series as far as Tahiti is concerned, as it is difficult to imagine further degradation in this direction than is presented by the simple loops of this specimen.

In Fig. H we come again to a rich style of decorative art, admirable in technique and elaborate in detail. The patient labour displayed in cutting these endless rows of tracery from a solid block of wood, and preserving throughout the really dignified character of the design, is little short of marvellous. The example here figured is the largest of three belonging to the Missionary Collection. The handles of all are closely bound with finely plaited sinnet, over which, in one, are thick ropes of human hair. The heads are in openwork, having on each face and along the sides vertical ribs with lozenge-shaped openings between them, and entirely formed of human figures in style half-way between Fig. 11, in Plate XIV, and Fig. D, in Plate XIII, and, as it seems to me, it is the next step to Fig. D in the series. The richness of the design here, to some degree, interferes with the clearness of the outline. These three fine pieces unluckily have lost their names, and all that is known of them is that they were "the district gods of Mangaia, one of the Hervey Islands." Their Mangaian origin will explain the resemblance in details to Fig. 4, Plate XIV, the latter being derived, it will be remembered, from the handle of a Mangaian adze. The three next Figs. J, K, and L, have a strong likeness to each other, and while, as I hope to show, they possess all the essential features of Fig. H, there is a vast difference in their style of execution. They are flat bats of coarse wood, rudely carved on one or both faces with zigzags, &c., and having on the upper end holes pierced through them, lozenge-shaped, square, and oval, respectively. In the Missionary Catalogue they are called "flat club-formed idols," without special locality, but there can be little question that they are from the vicinity of the Hervey Group, as well from their style as from their similarity to Fig. 2 in Ellis' frontispiece, "an image of Tebuakina, three sons of

Rongo, a principal deity in the Hervey Islands." Let us now take their points of resemblance to Fig. H. In the first place two of them have the same general outline in the upper part, as well as similar rows of figures down the sides; one has three vertical rows of lozenge-shaped piercings, while Fig. J has points of its own which must be taken in detail. The upper edge has three projecting loops, each of which is formed of two figures, and down the sides are the remains of figures of precisely the same type as is seen in Fig. E. Upon the face are also several figures of the same kind. In these respects it is carved with greater elaboration than the other two, but these are otherwise essentially the same, though their backs are uncarved. Their edges are serrated, the teeth being unequal, and these angular projections I take to represent the more realistic human figures on the edges of Fig. J.

The surface decoration of all three is mainly composed of transverse bands of zigzags, and the occurrence of this design in the present connection tends to strengthen my theory of its derivation from the human figure. Here we have three idols (J, K, and L) from one group of islands strongly resembling in form another more elaborate specimen (Fig. H) from the same group. This last has, as surface decoration, projecting rows of human figures depicted in an ornamental fashion, while in the three simpler idols a zigzag pattern serves the same purpose. It seems therefore that they may without any great stretch of imagination be regarded as identical in meaning and purpose. There only now remains one other point—the holes in the upper part of these idols, and these again strengthen the continuity of the series. In Fig. K we have three vertical lines of lozenge-shaped openings, just as in Fig. H, where they continue between the rows from top to bottom. In Fig. L the single opening may be called oval, recalling Fig. 8 in Plate XII, while Fig. J, Plate XIII, has eight square piercings, and upon these depend our further progress.

I have always been puzzled to understand what underlaid the general design of the openwork handles of one style of Mangaian adzes. These are usually circular or square in section, very thick, and with square or oblong openings symmetrically disposed. The whole conception seemed so strongly suggestive of joinery, a method quite unknown in these islands, as to lead one to connect it with imported ideas. This is evidently not the opinion of Mr. Gill ("Jottings," p. 11), for he pointedly gives the native names of these two varieties. To try and explain their meaning I will first go back to Fig. E. The head of this idol is somewhat uniform from all points of view, and has at the sides four plume-like additions, while it is pierced

with two quadrangular openings, one above the other, each of the four faces being alike. Seeing how much similarity exists between the details of this piece and the club-like idol (Fig. J), I cannot but think that this additional similarity in the details of the head may justify one in saying that they are identical in purpose. To run the matter to earth if possible I have placed at the end of the series of idols a sacred adze and a sacred drum, the first from Mangaia and of a common type, while the drum is from Tahiti, where it was obtained by Mr. Ellis, who figures it in his "Polynesian Researches," vol. i, p. 282. The adze handle will be seen to preserve the same outline as is found in Figs. H and J, while the similarity in the disposition of the square openings is very striking. If the deduction is justified, that these designs on the handle of the adze have a religious significance, recalling to the mind of the initiated the image of the divinity, it would seem to be analogous with the European practice in mediæval and later times, of using the cross-guard and hilt of the sword to represent a crucifix.

The drum which ends the series is a fine old specimen of the *pahu-ra* or temple drum, beaten on all occasions of extraordinary ceremony at the temples, and is fully described by Mr. Ellis (*loc. cit.*), though this seems to be a small example of the class, as they are sometimes eight feet high. It is introduced here chiefly on account of the design of the foot, as showing another instance of the occurrence of the square openings upon a sacred object. (Fig. N.)

It will be seen that I have said nothing of the mythological aspect of the various divinities. This has already been done by others better fitted for the task; one invaluable work being the Rev. Wyatt Gill's "Myths and Songs of the South Pacific," which contains a most interesting collection of legends relating to the religions and traditional beliefs of the natives of this part of the Pacific. Further, to have traced the powers, attributes, and relations of these idols would have greatly complicated the subject, and I judged it to be inadvisable to draw upon the writings of others, unless from actual necessity. One fact that may be mentioned here seems to me somewhat curious, *i.e.*, considering the great number of marine deities in the pantheon of these islands, and the semi-sacred character of the shark, who was believed to be the servant, or messenger of the gods, and who shared with other fishes a kind of divine inspiration; notwithstanding these points of intimate connection with the gods, I have not found a single representation of a fish among the whole series, even as an attribute, or adjunct to the principal figure. The contrast in this between the

islands of the East and the West of the Pacific is very marked, in the latter the figures of fish, either as deities or amulets, are of constant occurrence. Birds, in like manner, are absent from this group of islands, though Mr. Ellis mentions a god of the air worshipped under the form of a bird (ii, p. 197), and states that a number of birds, as well as fishes, were worshipped.

From the variety of forms assumed by the same god, it is evident that they were used for different places or occasions, and Mr. Ellis throws some light upon this matter. He says in one place (p. 203), "But while the people supposed they were spiritual beings, they manufactured images either as representations of their form, and emblems of their character, or as the vehicle or instrument through which their communications might be made unto the god, and his will revealed to them." Again (p. 205), "Among the numerous ceremonies observed, the *paeatua* was one of the most conspicuous. On these occasions, the gods were all brought out of the temple, the sacred coverings removed, scented oils were applied to the images, and they were exposed to the sun. At these seasons, the parties who wished their emblems of the deity to be impregnated with the essence of the gods, repaired to the ceremony with a number of red feathers, which they delivered to the officiating priest." In return they received from the priest similar feathers, which had been placed in or upon the idol on a previous occasion, and had thus acquired the desired virtues. These feathers were taken home, and on occasion, were invoked to help the owner. If his prayers were attended with success, he would probably then have an image made to which the feathers would be attached, and later perhaps an altar and rude temple were erected for them.

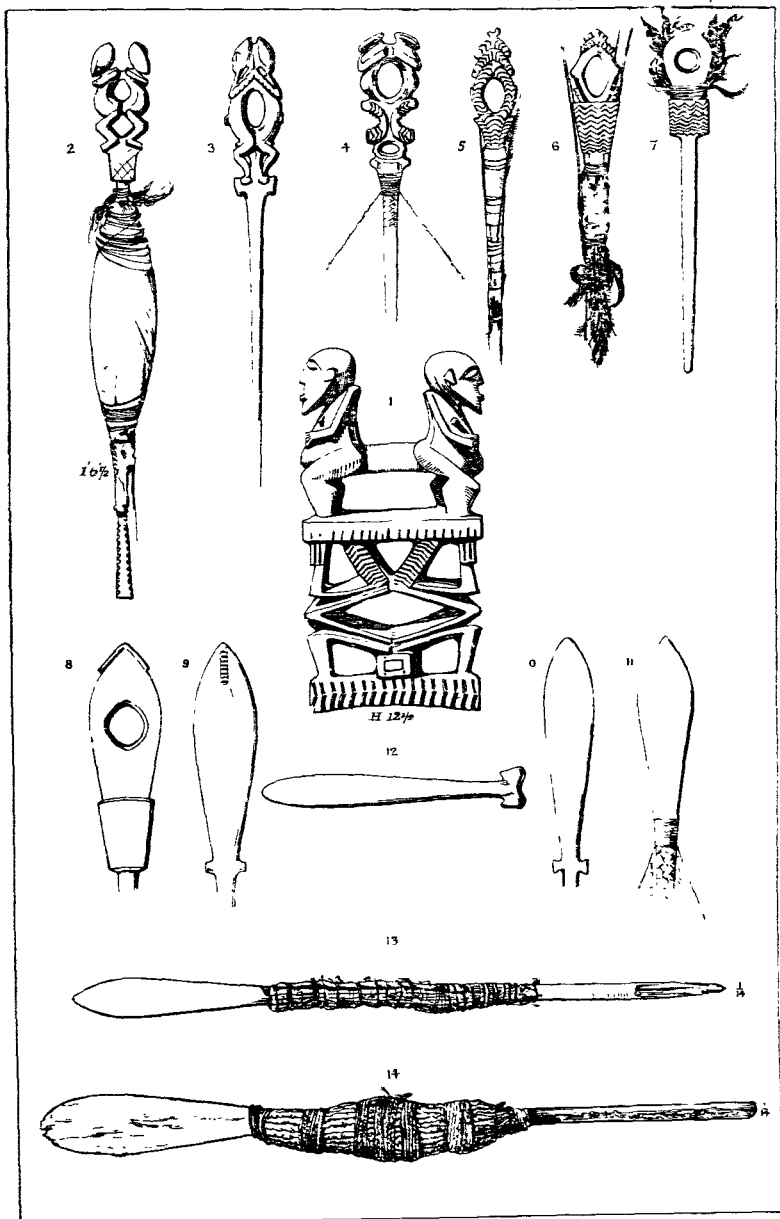
Some of the lesser idols now under consideration may be accounted for in this way. Others may be "the flags of the gods or emblems of the idols" which "were carried to the battle to inspirit the combatants." The flat boards, Figs. K and L seem to be the same object as are represented in Ellis, ii, p. 217, where a figure of an "Altar and Unus" is given, but I cannot find any account of the *Unus* in the text, though as similar objects appear in his view of a "National Temple," they should be figures of gods (p. 207).

I have made frequent references to Mr. Ellis's work, "Polynesian Researches," and I have often had occasion to make use of it other times, but I cannot refrain now, when many of the objects collected by him or under his auspices are under consideration, from adding my small tribute to the immense value of this remarkable work of a most remarkable

man. Published more than sixty years ago, long before "Anthropological Notes and Queries" were in vogue, it contains a most minute account of the daily life, amusements, war, customs, and more particularly of the religious beliefs and superstitions of the natives of Tahiti and the neighbouring islands, an account which has, I think, never been surpassed, though it is perhaps equalled by Mariner's "Tonga," so far as permanent value is concerned. If more of our early missionaries had possessed the keen intellect, the wealth of sympathy, and the powers of observation, of William Ellis, there would be far less to regret, and infinitely more to be proud of, in the history of our missions.

In concluding these observations, I would repeat that my main purpose was to call the attention of the members of the Institute to the great historical importance of the London Missionary Society's Collection, now transferred to the British Museum. In placing it before you in the several progressive series, I have done so in the hope of adding to the interest of the descriptions, by taking the specimens as a coherent whole, rather than as isolated units of ethnography. But I have not been led to adopt this method from any theories of my own or from those of others. The subject grew, and the series lengthened, almost without any effort on my part, and further investigation would, I do not doubt, produce similar results in other directions.

My interest in the preparation of this series has been considerable, and has been shared to the full by my friend Mr. Edge Partington, who has been my collaborator whenever it was possible, but we can scarcely hope that a description of the work will possess the absorbing interest of the work itself.



S . E. PACIFIC . SACRED OBJECTS .
(*London Missionary Society Coll*)

DESCRIPTION OF PLATES XII TO XIV.

Plate XII.

Fig. 1. Sacred ornament of a canoe, probably from the Island of Huahine. A similar specimen is represented in the frontispiece to Ellis's "Polynesian Researches," ii, Fig. 6, and described at p. 221. The example here figured is the only one on the plate not derived from the London Missionary Society's Museum. It is carved in moderately hard wood, now nearly black. The upper part represents two gods of seamen, back to back, seated upon an open-work stand, which is composed of conventional human figures. An end view of the base is given on Plate XIV, Fig. 3. It is placed here as introductory to the series which follows in Figs. 2 to 14.

Figs. 2 to 11. Series of handles of fans to illustrate the derivation of the simple form shown in Fig. 11, from the complex or naturalistic form shown in Fig. 1. All these handles, except Figs. 4 and 11, have been deprived of the fan itself, and in its place most of them are wrapped with bark cloth, sinnet, &c., and decorated with the long tail feathers of the frigate bird, cock's feathers, human hair, &c. An explanation of these additions is given in the text.

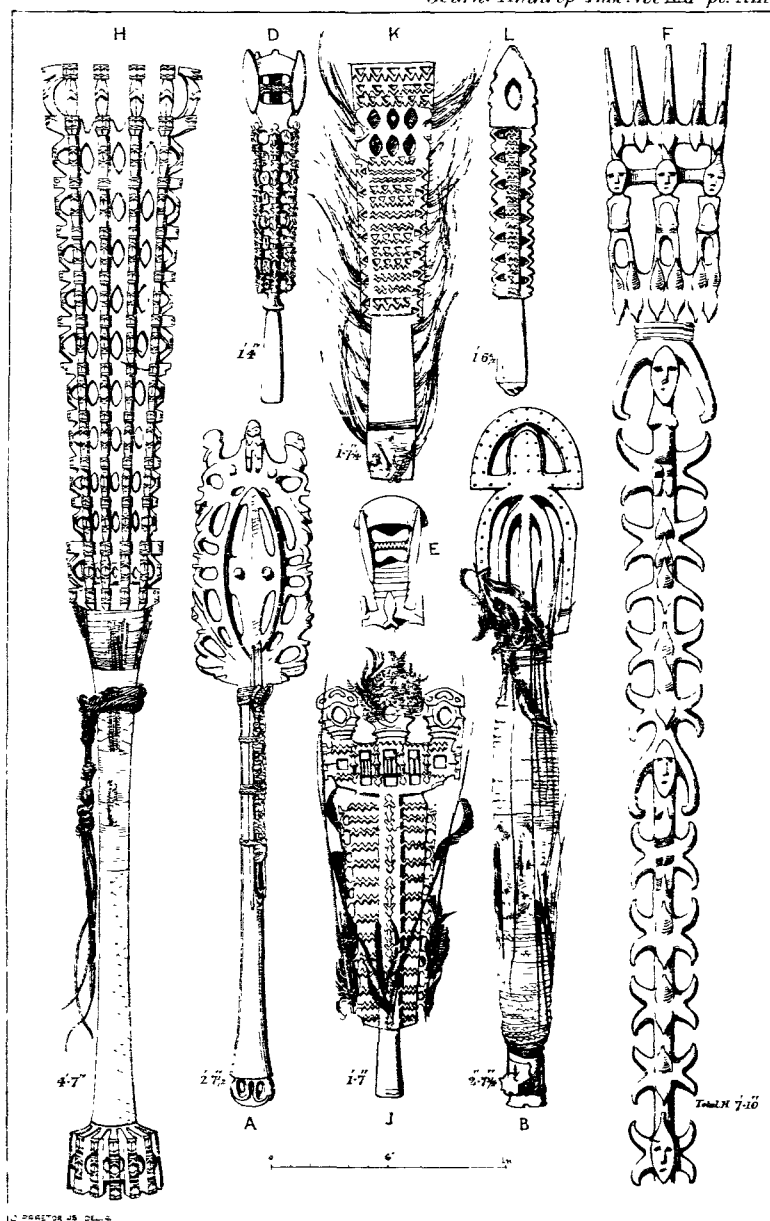
Fig. 12. Spatulate object of hard brown wood, of somewhat thicker section than the preceding numbers. Upon it is written in ink (apparently in the hand of Mr. George Bennet), "called a To, a thing worshipped in all the islands." The islands here referred to are only those comprised in the Tahitian, Hervey, and perhaps Saumotu Groups. The Rev. W. Ellis, in speaking of "the South Sea Islands," invariably confines this term to the South-East Pacific Groups.

Figs. 13 and 14. Sacred paddle clubs, invested with bindings of elaborately knotted sinnet made fast to the middle, leaving both ends free. Fig. 13 is in good condition with the polished surface still remaining, though the extreme end of the handle shows signs of the ravages of insects, or of decay. Fig. 14 is in a very weather-worn state, the whole surface being furrowed and irregular from decay of the softer fibres of the wood. This condition seems to be fully as well marked beneath the sinnet bindings as elsewhere.

Plates XIII and XIV.

The series shown in Plate XIII is continued on Plate XIV, from A to N. It comprises types of the most important of the idols from the London Missionary Society's Museum, selected and arranged to show the connection between the simple and elaborate varieties.

- Fig. A. Tangaroa, one of the principal divinities of Polynesia, carved in hard light brown wood in the form of a long-handled bat, the blade of which is in open-work. This specimen is the one figured in Ellis (*op. cit.*), frontispiece, vol. ii, Fig. 3, and is described as a representation of Taaroa. To the handle a skewer of hard wood is fastened by sinnet bands. The open-work end of the handle is in the form of a contorted human figure.
- Fig. B represents a similar divinity, but this specimen unfortunately has no history, and it is therefore impossible to say whether it is a figure of the same god. It is of softer wood than the last.
- Fig. C (Plate XIV). Taringarue, the superior god of Atiu, one of the Hervey Islands. The head is of hard brown wood, carved in open-work with three groups of figures of gods. In the uppermost group the figures are bent backwards towards the centre, in the two lower ones they are practically upright and face outwards. The design is an amplification of Fig. A, which has but two edges, whereas Fig. C has six. The body of the god is formed of a shapeless bundle of plaited sinnet ropes, once covered with small feathers, but the greater part of this covering has now disappeared.
- Fig. D. Idol of dark brown wood from the Island of Metiaro, Hervey Group, S. lat. $20^{\circ} 1'$, W. long. $157^{\circ} 34'$. The construction is on the same principle as the preceding figure, but the lines are more angular and the detail of the upper part is different. It has six radiating open-work flanges formed of human figures. The peculiar form of the head with its plume-like ornaments at the corners can be well seen in the plate.
- Fig. E shows the upper end of a similar idol, probably from the same locality. It differs only in the number of the radiating flanges being four instead of six, and in the absence of the central column in the interior of the head.
- Fig. F. Idol of elaborate and unusual workmanship, of reddish wood. The five spikes at the top probably represent the more shapely ornaments at the head of Fig. H, while the



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group below, no doubt, is one of the triads of Polynesian divinities. Both the name and locality of this singular idol are lost. Both its faces are alike, and from the upper part it has a stout rough sinnet rope to which large shells are attached. In reproducing it on so small a scale it was thought better to omit this adjunct. Probably from the Tahitian Group.

Fig. G (Plate XIV). Idol of brown wood of simple outline, with two groups of four flanges. The resemblance between this figure and Fig. C, beside it, will be obvious. This, like the last, is probably from the Tahitian Group.

Fig. H. This is the largest of the three "district gods of Mangaia," Hervey Group, but unluckily no further information as to their names, history, or purpose is forthcoming. All three idols are of the same design, but this one only has the expanding crescent-shaped arms at the head, one of which is shown on a larger scale on Plate XIV, Fig. 5. It is carved in pale brown wood, and every detail is finished with the greatest precision. The design consists of a number of vertical ribs formed of highly conventional figures of gods, the spaces between the ribs being pierced with lozenge shaped holes. The handle is of circular section, neatly bound with fine sinnet in a lozenge pattern, and one of the three has in addition a stout rope of human hair round the handle.

Fig. J. Idol formed of a flat piece of brown wood elaborately carved on the faces, edges, and top with figures of gods. This has no special history, but the style of carving of the upper part strongly recalls that of Fig. C, while the details of the faces and edges are like those of Figs. D and E. As all these are from the Hervey Group, it will not be too much to assume that this also is from that group. This specimen consists of the same elements as Figs. C, D, and E, but placed upon a flat surface, and it bears much the same relation to them as Mercator's projection does to a globe.

Figs. K and L. These two idols are but simplified versions of the preceding figure. In Fig. K the piercings recall those of Figs. H and J, but in Fig. L those openings have disappeared, and the zigzags and irregular serrations of the edges only remain to represent the elaborate borders of human figures seen in the foregoing idols. These objects are no doubt from the same locality as Fig. J.

Fig. M (Plate XIV). Richly carved ceremonial adze from Mangaia (Brit. Mus. Christy Collection). This, with the drum shown in the following figure, is introduced here to illustrate the

origin of the quadrilateral openings so frequently found on these objects. The outline of the handle of the adze will be seen to correspond very nearly with that of Figs. H and K, and the position of the openings is also much the same. As this shape of handle is distinctly impractical, it can only have had its origin in the form of some sacred or ceremonial object. Its practical utility was clearly a secondary point.

Fig. N (Plate XIV). Drum (*pahu-ra*) from a temple from Tahiti. Figured in Ellis (*op. cit.*) i, p. 282. A typical but small specimen. The openings in the base probably derived from representations of idols.

The Goddess Tii Vahine.

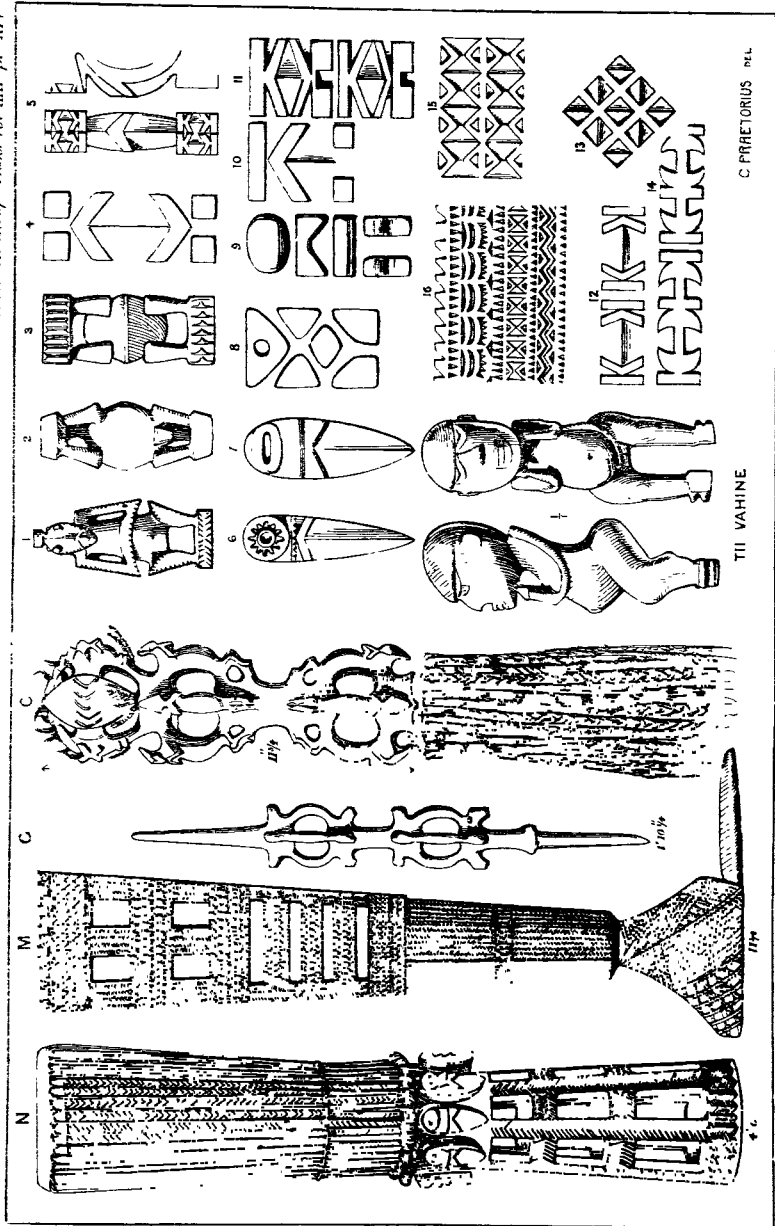
This little figure is carved in brown wood, and was enshrined in a turtle shaped case also of wood. It was obtained by Mr. G. Bennet in Tahiti, as described in Tyerman and Bennet's "Journal," ii, p. 58; quoted in the text. It is given here as a characteristic type of Tahitian sculpture of the human figure. [N.B.—By an oversight the scale of the drawing is marked as full-size, whereas it should be *one half linear.*]

Plate XIV. Figs. 1 to 16.

This series is designed to show the derivation of the common forms of Mangaian surface decoration from the human figure, *i.e.*, figures of the gods.

DISCUSSION.

The PRESIDENT expressed the satisfaction of the meeting that these invaluable memorials of Polynesian religion and art had again come into prominence. The London Missionary Society, to whom the high praise is due of having had the wisdom to preserve them at a time when the importance of such objects had hardly come into general view, had placed them in the great National Collection, and one of the first results of the new opportunity of studying them was the important paper in which Mr. Read had followed out their artistic history. His series of forms arising from human figures degenerating into ornament illustrate and confirm instructively the principle displayed by General Pitt-Rivers in 1875 in his well-known series of New Ireland paddles, now in the Pitt-Rivers Museum at Oxford. With regard to Mr. Read's argument similarly tracing the human form into the



C. PIRETORIUS DEL.

TII VAHINE

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ORIGIN OF MANGANIAN ORNAMENT.



geometrical carvings so characteristic of the ceremonial adze-handles of the Society Islands, &c., the President had confirmatory evidence to offer. When, some years ago, the Rev. W. Wyatt Gill came to Oxford, he had suggested to him that these carvings were human figures in the last extreme of conventionalization. Mr. Gill replied that not only was this the case, but that the natives recognized certain of them by the name *tikitiki tangata*, "images of man." With regard to Mr. Howorth's remarks as to the origin of the Polynesians, the President called attention to the manner in which Mr. Read's evidence illustrated, side by side, the natural connection between the gods of different island groups, and the independent art-development which had taken place on this common material. For instance, he had lately bought a fan-handle from the Marquesas, ornamented by two figures who were undoubtedly the two which belong to the series illustrated by Mr. Read in distant islands in their course of change into ornamental forms. Mr. Read would probably agree that the Marquesas Island types of these deities (whatever their names and natures), are nearer their actual origin than the corresponding figures on the Society Island carvings.

ANTHROPOLOGICAL MISCELLANEA AND NEW BOOKS.

Notes on a part of the Somali Country.

By Captain G. D. CARLETON, Leicestershire Regiment.

THE district I wished to visit was the Khansa. To reach it the Kafila route to the Ogadayn is followed, which conducts one south-west from Berbera to the Pass of Jerato for forty miles. This pass is similar to what is known as a "ghat" in the plains of India, and by it the plateau of Somaliland is reached at the Asa Hills. There is a break here in the Golis Mountains. Gān Libaah (the lion's paw) on the east is 5,200 feet above the sea. The top of the pass is 3,700 feet high.

A large tree, such as the one at Sik, a few miles south of the pass, is uncommon in these parts. Here, leaving the Kafila route, my route trended to the east of it, leaving Ononof on the west; then passing along the plain of Shilmaleh, the northern edge of the Khansa is reached about thirty miles south of the Pass of Jerato.

This district gets its name from the fact of its being thickly covered with the umbrella-shaped mimosa thorn bushes; in Somali called "Khansa." A species of grass also grows in the district in great abundance. This grass gives cover to wild animals, and food to the droves of camels and flocks of sheep of the Somal. For the latter reason it is much frequented by them during and after the rainy season. Before I reached the Khansa, passers-by warned us to hurry on, as the country was rapidly drying. This was about the middle of August, when the rains had subsided.

Arrived there, I found their information correct. At three camps I found only one zareeba inhabited. We asked for a drink of water passing it, and the reply was that there was not a drop among them, accompanied by the usual "willāhi! billāhi! tellāhi!" which appeal to the Almighty, as a witness to the truth of their statements, is constantly in the mouth of a Somali.

I had not been many days in the Khansa when I received a polite invitation to make myself at home there from Sultan Noor, apologising for not having come to see me, and hoping I would call on him, ending up, as is to be expected, in Somali country, with a request of some present. His invitation was declined, but he was determined to get something out of me, and some time after he rode over with some retainers to my camp

at Yehli, and followed on to the chase, finding me out. They must have ridden fast, as for several days after I found shreds of red cloth, torn from their clothing, on the thorn bushes along the road they had traversed.

He came round a corner during the "shikar," where I was expecting a lion, and we broke off for a short time to press hands with him. He seemed a very good fellow, and he offered at once to help by riding and heading the beast. He had two brothers and a cousin with him. There is no ceremony in receiving his dependents. Everyone approaches him and presses hands without much appearance of respect.

Sultan Noor accompanied us home. On the way he mounted us, and also gave an exhibition of spear-throwing on horseback. He got his present and a dinner, and retired.

Sultan Noor has succeeded to the sovereignty of the Burao country by the death of Sultan Aood; but I doubt if he has much authority in that part. He had not been there when I met him. I did not go to see him, as his people would have eaten me out of rice and dates.

Sultan Noor is of the Ismael Arrah tribe. The Ismael is the royal tribe. He and his relations are remarkable among Somalis for the growth of hair on the face, which is abnormal. They are also above the average height of tall Somalis.

The other tribes of the Habr Gerhagis forward him a yearly tribute of camels and sheep; but otherwise I believe they do not pay him any allegiance.

He is dull in conversation and boorish in manner. I afterwards met his eldest son, who also seemed a dull youth.

A brother officer of mine met one of the Sultan's brothers afterwards, somewhere on the Tuyoo plain, who volunteered to carry his letters to Berbera. The letters actually *did* arrive there after a few weeks. I was pleased to meet the Sultan, who was very civil, and said he would give me any help I needed.

It was not long before I met an old gentleman, Abdulla Dowwert, head of the Gumboor clan of the Habr Yunis. He paid me several visits, and was most useful when water was scarce, bringing some from some distance. He had a blood-feud—then active—with the Ishak clan, and thought I might be useful. His greeting with me was most effusive, he always gave my thumb an extra squeeze. He at last asked for help for escorting some of his men to Berbera; but knowing the sternness of the Aden Politicals, I had to decline. I should have liked to help him, as he was a most obliging man. On the return journey I stumbled on a skull of a Gumboor freshly killed, at the big tree at Sik. They had been surprised when watering camels.

Abdulla Dowwert's manner is most dignified, and his delivery in conference very impressive, as he has a very deep voice.

An open attack, such as that on the Gumboor watering party, is not of the kind of warfare most admired among the Somal. It was provoked by a treacherous murder of some Ishak, while asleep,

by Gumboor men; this latter being the most approved method of fighting.

My first interview with this man was very formal, and he assumed the favourite attitude cross-legged, leaning on his spears, while he said his say in short, decided sentences. A Somali never speaks more than ten or a dozen consecutive words without one of his hearers breaking in with "waiyah!" or "kuuh!" = "yes." For hours in the evenings I have listened to this "kuuh" reply while somebody has been telling a yarn.

A Somali's full dress has been often described: it is composed of a dirty yellowish-brown "tobe," a pair of shoes, a sword, two spears (the Eesa carry only one), a shield with tassels of coloured wool, a prayer carpet of leather, and a water-bottle for religious ablutions slung on back.

The richer wear reddish tartan-like tobes. Beads and a Koran-leaf holder complete the dress.

The "tobe" is of two pieces of Manchester cotton sewn together. The shoes are Somali make; they are roomy and flat, which, I think, must be the reason Burton called the Somal a big-footed race. A thong over instep and heel keeps the shoe on. They are worn alternately on right and left foot. I very seldom saw a Somali bare-footed, unless it was when carrying his shoes.

I never saw a Bedouin with any head-dress, except one old man, who was wearing a straw pork-pie shaped skull cap.

The spears are broad in the blade, and of bad iron. The spear shafts are very light and flimsy. They sometimes carry a lighter spear with a smaller square head. My men used to practise throwing with this latter spear when returning to camp. A good thrower hurled it sixty yards. At twenty yards they could hit small tree trunks with accuracy.

The shield is of oryx-antelope skin or (the best) rhinoceros hide. The middle of the back of the skin of a *male* oryx is alone accepted for a shield. A Somali tries to keep his shield white. The rhinoceros ones are the whitest, and are generally covered to preserve them from being soiled.

The shield is carried, when in use, by a hide handle at the back, and held forward. It is carried on the arm when not in use; a string of three coloured tassels hang from it.

The sword ("bilauwa") is flat and two-edged, blade about two feet long; hilt of bone, iron in centre of handle and at base; scabbard of hide sewn to belt, which is buckled round the waist. The sword is buckled under the tobe.

A Somali, when he wishes to appear respectable, puts on a string of beads or of berries, ninety-nine being the Mussulman number of beads, one for each of the ninety-nine epithets of the Prophet. These beads are of black or white bone or wood. The leaf of the Koran is sewn in a leathern thong, and worn round the neck.

A charm is sometimes worn in a silver box fastened to the arm above the elbow. My men took off all these ornaments in the field, but on return to camp they assumed their usual dress to receive callers or passers-by.

A white "tobe," such as is seen in Aden and Berbera, is never seen in the country. All are dirty brown or red.

Some people wear silver rings on their fingers.

Respectable people also carry the prayer carpet folded on the shoulder, and a water-bottle, holding about a pint, slung over the shoulder.

Clubs of various shapes, and generally, also, a thin stick of five to six feet in length, are also carried by the villagers.

The boys, who are out guarding the milk-camels grazing, carry arms when not too poor. They told me they are given arms when about ten years old. I saw many of them about ten or twelve years of age with their small spears. We often met these milk-camels (S. "gel") grazing. As they attract lions and the camel men know the ways of the beasts, the camel men and boys remain all day with their charges, drive them to the zareeba in the evening, and pen them up in the night till the lions have laid down on the following day. In one place we saw them still penned up at 8 o'clock a.m., being milked. They had lately lost several camels by lions.

Most of the Bedouin shave the head. Burton says they get shaved by the "widad," or hedge-priest. I could not find out that this was the case. We only once met a "widad," and, as he passed us, his reverence offered up a prayer for the death of the lion, to which the men with me replied "Ameen!" This "widad" had not his ink-bottle and Koran, and as he had a side-lining camel rope wound round his head I presume he was off to attend to his worldly affairs.

The "widads" are not molested by robbers or by blood-feuds, and they cultivate the soil, in some places raising crops of maize and millet. The Bedouin would not be allowed by robbers or by blood-feud enemies to enjoy such luxuries.

When the hair grows as long as a quarter of an inch they plaster it with mud or wood ashes; mud, they say, keeps it clean. Young Bedouin sometimes let the hair grow long, and they turn it from its natural black colour to a reddish-brown by adding lime to the plaster when making their toilet. "Crimson wigs" (mentioned by Burton) have gone out of fashion, they are never met with now in town or country.

"Tooth-sticks," much used to clean the teeth among the town people, are not much in vogue with the Bedouin.

We often heard the camel boys whistling in the way Burton describes. Whistling is considered very bad form among Mohame-dans in India, and by Hindus and Arabs.

Many of the Somal have fine, bold, manly features, but many, too, especially among the women, are not beautiful to look on.

Burton describes the Somalis as wanting in the powers of endurance, and unable to bear fatigue. The experience of several officers who know the Somal, does not bear out Burton's estimate in this respect.

We have seen them day after day, and all day, after game,

carrying heavy rifles without a murmur. They never think of themselves, it was always "how much could the Sirkal walk or do?" An officer in the Royal Engineers was flooded out lately, and rode in 60 miles to Berbera. He was accompanied by a Somali, who walked these 60 miles without once stopping to rest.

A little man of the Habr Yunis, from whom I hired a pony, rode 40 miles home on it when he left me. We caught a Dolbahanta horse stealer who had come 60 miles "on an empty stomach," riding his stolen property. This youth had to give in and came for food. He was galloping on a bare-backed pony outside the camp, when they enticed him in, and recovered the stolen pony. The thief was ashamed (of his being "taken in," I suppose) and covered his face, all but his eyes, with his tobe. He had several stories, the most interesting being that he had stolen the pony to score off a neighbour who had killed his father; also that he wanted to marry, and was too poor to pay what the father of the bride asked for his daughter.

My men drank very little out hunting. They have great endurance in this matter of being able to withstand thirst.

They are the most abstemious people imaginable, drinking only milk or water.

Most of them have extremely white and well-set teeth.

They very rarely seem to chew tobacco, nor do they smoke much. Their eating capacity is very great. A common occurrence is to hear of camels being stolen, killed, and eaten on the spot by thieves. Camel's flesh is much loved by the Somal. When obtainable they prefer boiled to baked meat.

The ration that has been established by custom for a Somali servant in the district is composed of 1 lb. of rice, $\frac{1}{4}$ lb. of dates, and 1 oz. of "ghi." My men worked well on this, with only water to drink, and often not enough of that, as, at one place, we had to send 60 miles to procure it. I could not call the Somal "a feeble race."

The Somal of this district are poor; I saw two clans on the move, one of the Ayyal Adan and one of the Arab sub-tribe. Horned cattle are not common, a cattle plague killed off most in 1888. Sheep and milk camels supply them with meat and milk. The sheep are of the common African species, smooth-haired, white in the body, with black heads and fat-lobed tails. At one camp, just as we were packing up to move, a clan on the move came up to encamp. The first arrivals are the sheep which stream around, making the country look quite clean with their glossy white skins. Then come the milk-camels, and lastly, the camels of burden with the household property. Each camel is loaded with the camel saddle, which is formed from mats called "hirror," and "aus" or "kibbed," roped in such a way as to form a ridge over the back-bone, hollow in the centre, allowing free play to the back without galling it. The mats cover the sides of the camel, and the ropes girthed underneath the animal keep the saddle in its place.

Three "kibbed" and one "hrrar" form a saddle. The hrrar has a soft pile which is laid nearest to the skin and prevents galls.

On each side of the saddle are carried the "gurgi" (or hut) sticks. These are driven in the ground at the ends, and the saddle taken off the camel is laid over the sticks and forms the roof of the hut.

"Hans" (or water-vessels) and milk pails are slung on either side of the camel. A spare "kibbed" was on many camels, made into a nursery on the top of the saddle. I saw several little black brats peering out. Some, however, were being carried in the usual fashion, astride on the substantial bustles of their mothers. These latter have been fully described by Burton.

The Somali maid is not beautiful, the tags of hair worn by her not being so becoming as the bag worn by a married Somalin.

A Somali family is a study in ochre with the exception of the sheep. Men, women, children, camels, every article of furniture and clothing is ochre coloured, dark or light. The Somal have a loathing for dogs. A cat would drink milk, and therefore is not tolerated.

The children are shaved, a quaint-looking fringe being left.

They are allowed to run naked, as in other eastern countries in the tropics.

The "han" (water-vessel) is of two sizes, holding five and ten gallons. It is made of the pounded bark of certain trees made into cords and woven, and then calked with wax. The lid forms a drinking cup. It is carried in a crate of wooden sticks.

The other vessels, as the water-bottle for religious ablutions, the milk-pail and milk holders, are made from pounded bark of trees, as are also the mats for the camel saddle.

A camel carries four large "hans."

Burton says his milk-pails are put at the head of a grave when a man dies. They must be very poor in this part of the country, as I did not see the custom carried out. This Khansa is very poor. Adan Joogli, a rich man from Burao, almost laughed at them for being so poor; he invited me to Burao, where he said I could really see what the Somal were.

Saddle. The saddle is like the Egyptian saddle—(Burton). It has a high cantle and pommel. The tree consists of a rough framework of wood, hollow under the seat, resting on a thick cloth numbda. Sore backs are very common. Over the tree lies a piece of black-haired camel's hide, and under the rider's seat is a piece of red leather attached to the pommel of the saddle.

The stirrup leathers are narrow, and the irons are made so as to admit only the great toe; shoes are slung over the back in riding. The whole is girthed up by a leather thong. Saddles often turn over; this is rather discomforting to a rider when performing the salute, which is a compliment sometimes paid to one. The rider gallops up, pulls up short, and goes through several evolutions, which would not be easy but for the murderous Arab bits which have been adopted by the Somal. The large ring through which the lower jaw of the animal passes is attached to

a long porte, and the wrench that can be given to the wretched animal can hardly be imagined.

After any "curvetting," blood streams from the mouth.

The "zareeba" (Arab) is a hedge of thorns built round a camping ground for the protection of the animals and owners from lions and from wandering plundering parties. They are built in round or oval shape from four to eight feet high. Ponies are fastened up close to the owner's hut—[Burton.] The zareebas in the Khansa are permanent, and are reoccupied each year during the rainy season, and vacated when the country becomes dry. I did not see any burnt down as Burton describes in the country of the more savage Eesa. A family seldom remains more than two months in these zareebas. The size of the encampment is of course proportioned to the number of animals to be protected. It is not the custom to have more than about 300 camels closely packed in one zareeba; but, in many places, zareebas, two or three, were made close together. We came across the two families—from which two of my men came—travelling in this manner together, their "kraals" made close to one another. We tracked lions past them, stopping to have a drink of cow's milk at Jama's Kraal. This was the only time we got cow's milk. I tried my best to appear to like camel's milk, in order not to seem peculiar, but could not acquire the taste for it. It is like thin sour cow's milk.

The zareeba is made up by the help of sticks called "angol," a fork at one end for pushing, and a crook at the other end for pulling the branches of thorn-trees together.

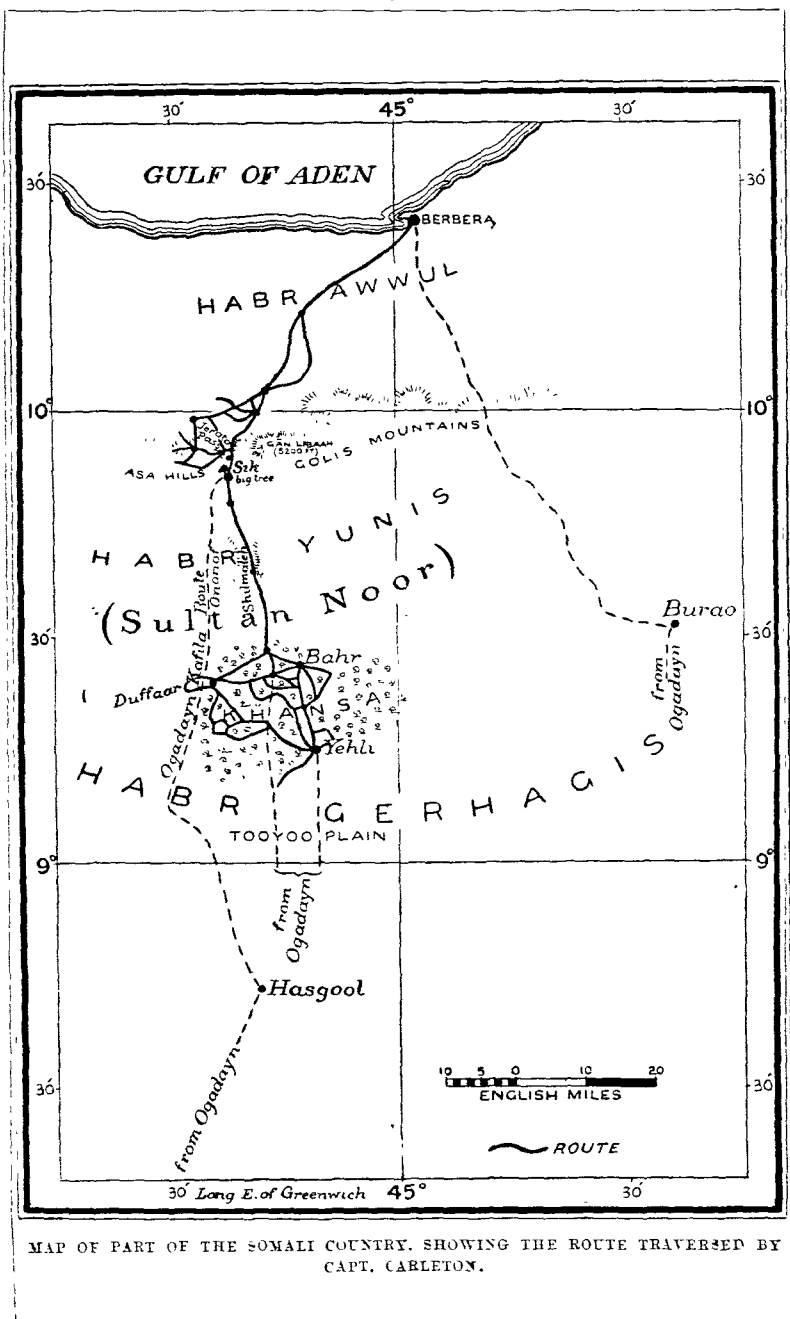
The hatchet, "godin," is of rough iron with a socket into which a forked stick is driven. It is a rough and clumsy tool to work with.

In the zareebas and at places close to the grazing ground of the camels, rough stands for salted earth are made for the camels to lick and chew. They say the salt makes the milk sweeter. The stands prevent the earth from being wasted. Smaller ones are made for sheep.

The Bedouin sometimes leave their aged sick, and decrepit, when they migrate, for the hyenas to devour. We did not come on any such cases. In one place we found in a deserted "kraal" a man with a broken leg tended by one other man and a woman. He would be useful if healed. If he had been too old, I presume he would have been left to die.

In deserted "kraals" are many gourds left lying about. These are used to store fat and gum in. There is edible (to Somal) gum found in places. I saw places where, on the zareeba hedge, these gourd-plants (a kind of creeper) were growing.

The Somal bury their dead, being Mussulman. The grave is covered up with stones, and a great man has a cairn built on his grave, if stones are available. In a stoneless region like the Khansa some other means must be used to keep off the hyenas. The grave is surrounded by a stiff fence of trees and large branches planted in the ground. The interstices are then filled up with



MAP OF PART OF THE SOMALI COUNTRY. SHOWING THE ROUTE TRAVERSED BY CAPT. CARLETON.

thorns. We found some difficulty in looking into one. The graves (two) were marked by plain mounds, a stick being driven in at head and foot of mound. Burton says the Somal have a horror of anything connected with death. My men were rather silent whenever we came by a fresh grave.

A game the Somal sometimes play is "gillip"; it is played with four (halves of) sticks, *i.e.*, two sticks about a foot long are split in half, each stick is therefore flat on one side and round on the other. One player holds the four sticks arranged as he pleases in the palm of the hand, and throws them down on a board marked out with squares in the sand. If all the sticks fall on their flat sides the score is six, and less according to some scale if they do not fall so.

The commoner games of "shah" and "shuntarah" are described by Burton. I frequently saw "shah" being played close by the villages and by the camel-boys, and watched the game. They played with bits of bean or pebbles on boards marked in the sand.

I enquired about "shuntarah," which I never saw played, and I was told it was only "a game for boys."

Fire is kindled by the Bedouin when necessary by the common method of rubbing one piece of wood against another. The Somal call the process "mudduck." One stick, about a foot long, is made smooth to fit the hands conveniently, and with a point at one end. The other stick is nicked nearly completely round the circumference. The nicked stick is held on some smooth surface as the sole of a shoe, and the pointed stick is twirled by being rubbed rapidly between the palms of the hands until wood dust falls down along the nick in the other stick. This catches fire by friction.

I was shown several very dry-looking kinds of thorn trees which supplied the best kinds of wood for this process.

I was interested in finding that a Somali, although a Mahomedan, will talk about the woman he intends to marry without hesitation. In most Oriental countries a man is insulted by being interrogated on such a subject.

But I found K., my head shikarri, most willing to dilate on the beauty and charms of his betrothed. He was engaged to marry a daughter of Ali Gush, a head-man in the Moosa Arrah tribe, and he told me—with great additions I have no doubt—of the large amount his future father-in-law required of him as the price of his daughter.

A Somali marries for other reasons than affection. In order to gain family connections and a strong slave—the wife is no more than a slave—a large amount would have to be paid.

K. is son of a head-man in the Mukahil tribe of the Habr Awwul.

The bride-beating custom is still in vogue among the Somal. One day I met K. in Berbera with a camel whip in his hand, and on my asking him, he assured me he would give his bride a beating with it on the marriage day.

Farrar, one of my men, came to me one day to complain that he had been negotiating with a father in his tribe for his daughter in marriage, and had paid part of the sum demanded by the father for his daughter. In the absence of Farrar, the young woman had married the man of her own choice, and the father refused to return any of Farrar's money paid in advance for his bride.

An interesting point I observed one evening in the customs of the Beduin. On seeing the new moon, all took a handful of grass and holding it upwards muttered a prayer with as many Arabic words as each knew. It is probably a prayer that they might have plentiful grass for their cattle to graze on. I don't know if this is an Arab custom.

I never heard Beduin singing; in the towns and in Aden, Burton remarked on the contrast in this respect in the manners of the Somal. He attributed the want of cheerfulness in the Beduin in singing to the almost constant state of danger they are in, and the uncertainty of life in the country.

All the names of places have meanings. "Behr," the name of part of the country, means the "grassy" place, and so the place of plenty, "Hedd," means an "enclosed place." "Deroleh" means the "hill of the Dero" (the Dero is a kind of antelope). "Shillmaleh" means the "hot hill." My Aden servant was a stranger to many things in his own country. He had been taken over to Aden when a child, by his father (a servant to an officer), and had never been in his native land since. The other men said he was amusing in the questions he asked. He was much laughed at for translating "Shillmaleh" as "tick-hill," from "shillin," the small tick, the grass in many places about these parts being very full of these parasites.

"Duffa'ar" takes its name from the "duffa'ar" plant.

"Wayla-warab" = a "small milk cow," and hence a "small watering place."

I met Adan Jooglee, a rich man from Burri way. He had been to look for three ponies stolen from him by his son. This son wishes to marry a woman against the will of his father, who will not give him the amount to be paid for his bride, and so the son is gradually robbing his father till he can get the sum made up to the amount demanded by his future father-in-law.

Another passer by, who stayed for a night in the zareeba, attracted my attention by his child, which cried all night. He was taking the child, which had been with the camels for the milk—as it was not in good health—from the camel zareeba down south to his mother, who was staying with the sheep at a separate pasture. He was a "Kassim" tribesman.

The Somal have great faith in camel's milk as a cure, on which subject Burton and James have written fully.

I was told that Sultan Noor's son would not succeed to his father's chiefship, but that one of Sultan Noor's brothers would.

I could not find out whether there was any fixed boundary between the Hubr Awwul and Hubr Gerhagis tribes. I imagined

the Jerato Pass to be the boundary until I found some Kassim villages (Hubr Gerhajis) below the pass in the Hubr Awwul country.

The Somal have no written language, so that it is difficult to express the sounds in writing in English. Burton and Hunter have written much on this subject, also about their ballads and bards. Their compositions are chiefly on the subjects "war" and "love." Packing up one's camp things, I have often heard them humming some fighting song (so they told me). Hunter gives a good translation of the lament of some poetical tribesman on the degeneracy of his clan in not revenging the blood shed by an enemy to the clan.

The camels graze chiefly on the leaves of thorn trees. Thousands of trees in the Khansa have the branches cut half through about twelve feet from the ground, and then pulled down so that the camels may be enabled to feed on the leaves, which would otherwise be out of their reach.

In a great many places the grass has been burnt. This has generally been done purposely to drive lions from the neighbourhood of the camels' grazing ground.

I observed some common dragon-flies at one surface pool after some rain had fallen.

At Behr I saw some large spiders with very strong webs woven between trees almost strong enough to stop a small bird in his flight.

I frequently saw the plover (*S. haydenheddi*) which Burton describes, and was told the same story with reference to his call, which the Somal translate into "I never eat!" "I never sleep!" and "I don't care for society!"

I met an Aden policeman on a month's leave; he sported spear and shield and tobe, having doffed his (I suppose) hateful Hindustani-shaped policeman's uniform of turban and khaki coat and trousers.

Not having a thermometer, I cannot give any idea of the temperature, but that the climate of the plateau in the Khansa was cool in August and September as compared with that of Berbera or of the plain below the Golis Mountains.

The Golis Mountains are mainly composed of granite, but the rocks which cropped up on the edges of the Khansa appeared to be of a grey sandstone. I could not trace any cause for the sudden cessation of the growth of trees and plants—other than short grass—when coming out on the Tuyoo Plain; but I suppose this plain is not favoured in the rainy season.

This (Tuyoo) plain is frequented in the rains by the Tora antelope (*Ancelaphus tora*), Somali "Seek." By September these have nearly all gone, their place being taken by the Soemering's gazelle (*S. Awl*), which graze in large droves in certain parts.

The surface soil appeared to be the same as in the Khansa, covered in places by the same thin layer of reddish sand.

The scenery in the Khansa is monotonous, and the view limited,

as the wilderness is very flat. The eye longs to have an open view. After spending a month wandering about the Khansa, it was a pleasure to the eye to wander over distance.

From the slightly rising hillocks on the north edge of the Khansa, the Tuyoo Plain can be discerned in the far distance. I do not think up to last year any Englishmen had been beyond the plain, except the James party. Sultan Noor, under whom is Hasgool, told me there would be no objection to my going to that part, and he would be very glad to help me; the country was, however, dry just then; but in the rainy season it can be visited, and is one of the grazing grounds of a family of the Arab clan, whom I met in South Khansa. One of these was full of accounts of the rhinoceros which frequent Hasgool; as he was tending the milk-camels, he was frequently disturbed by them. He described being chased (probably exaggerated to impress us) by a rhinoceros. This account he told us while conducting us to the place where a lion was heard calling that morning. These Bedouin are very business-like, and the first question, whenever asked to show lion tracks, is always, "How much will you give?" This reminds me to remark that the Maria Theresa dollar is now rarely seen in Berbera. Formerly, the "dollar" was the current coin. The "rupee" has now taken its place. The value of the rupee is well appreciated in the Khansa, though cloths are often more acceptable.

I observed the "cow-bird," which is pure white. I cannot give any ornithological account of it. It is pure white, about 1 foot 6 inches high. One came many days and attended my cows all day. It is called S. "Wohur," and is mentioned by Burton.

I was often pointed out the S. "Horr" bird flying many hundred feet up, generally sailing along before clouds of locusts, which came up very frequently with light showers of rain in the afternoon. The Somal seem to dread and hate the bird very much. They say they kill any wounded men, and are far more dangerous than the ordinary vulture.

They evidently fed on locusts when nothing better was to be got.

I observed the honey-bird (S. "Murriss"), and tasted honey to which it guided my men. It is about the size of a robin, and seemed to be chirruping continuously and flying from tree to tree to attract attention. The Somal say it shows one of three things—men, lions, or honey.

I was told that goats sometimes die by the number of ticks which attack them in these, the Golis, Mountains.

Ostriches are common both upon and below the plateau in this neighbourhood. We saw chips of their eggs frequently in the Khansa. I heard of a party of three Midgans (the professional hunters) on the Tuyoo Plain, who had been met with the skins of three of these birds. The Midgans stalk and kill them with arrows.

Every afternoon in September, in the Khansa, the clouds were

coloured pale crimson by flights of locusts (S. "ayyah"), which came in advance of light rain storms, which I found formed in the Golis Mountains on the north edge of the plateau, and travelled south from there. The bushes and trees for many miles were coloured pink by these insects, driving game away.

The Somali "dee-dee" I observed in the jungles below the Golis Mountains. Its curious shape and lethargic movements attracted my attention to this strange insect. Its lower part seemed to be soft, but its thorax is very protected by a hard shield.

The "dabbagall"—squirrel—is in general appearance like the Indian common squirrel, but has not the same call.

I observed a peculiar fly. In appearance it is like the common house-fly. My closer observance was caused by a stinging sensation—when I saw that it was provided, in place of a spongy, soft proboscis, with a very sharp dagger-like one.

The small tick is very plentiful in the Asa Hills. The lion seems to be much troubled with it.

The large tick I also observed frequently. One I found in a most peculiar place on an animal, viz., with its head embedded between the joints of the stomach plates on a small tortoise and its bloated body dragged along the ground.

The tortoise is very common in the Khansa. I frequently observed them grazing where there was any fresh green grass. They appeared to sometimes go undercover of bushes, but generally to be feeding, without fear of hyena or vulture, in the open plain.

I sat on a large one, one day, and he carried me a few inches, with heavy rifle in hand, my heels being off the ground, on his back.

The "armo" creeper is the most noticeable plant of its kind about here. It runs along the ground as well as on trees, and the trees in the hilly parts of the plateau are festooned with it. "Armo" is Somali.

"The 'Armo' creeper with large fleshy leaves, pale green, red, or crimson, and clusters of bright berries . . . forms a conspicuous ornament in the valleys."—(Burton.)

Wild thyme is very plentiful in the Asa Hills.

Large cacti grow most luxuriously also. I observed some in the kloofs about 20 feet high.

I also saw one other large fig-tree (S. "Birrh")—besides that at Sik—in a valley.

I was surprised that Burton had not especially called attention to the great numbers of butterflies.

Several times we found a plant, which may be of the "tuber" species, called by the Somali, "lickka." The seed part, called "tomayyoo," is eaten by the Bedouin. The flower part grows beneath the surface of the ground. It is shaped cruciform in transverse section. The centre is hollow and yellow. At the base grows the seed ("tomayoo") eaten by the natives. They say that the plant is dug up and eaten by an animal called "dologayyah," about which they said no more.

This aloe seemed to be the favourite food of elephants. The leaves are fleshy and full of juice. The elephants chew them and reject the hard, thorny points.

I wonder if this is similar to what is known in South Africa as elephant's food. It grows to about 2 ft. 6 in. straight out of the ground.

There is a curious shrub on the Golis Range, the stem and roots of which appear to be afflicted with botanical "elephantiasis." At a distance they look like rounded boulders of rock.

This is the most common species of aloes found in the Khansa; it grows there in great abundance. In shady places near water-holes it grows to 5 feet high, but generally does not exceed 2 feet in height in other spots. The flower is of a pale pink colour.

An acacia is common in these parts (S. Gabel).

"When young and soft it is eaten by the Somal, when old it becomes woody, and hard as a nut."—(*Burton.*)

[Sketches illustrative of the above notes may be seen in the Library of the Institute.]

Address to the Anthropological Section of the British Association at the Meeting held at Cardiff in August, 1891.

By Professor F. MAX MÜLLER, President of the Section.

It was forty-four years ago that for the first and for the last time I was able to take an active part in the meetings of the British Association for the Advancement of Science. It was at Oxford, in 1847, when I read a paper on the "Relation of Bengali to the Aryan and Aboriginal Languages of India," which received the honour of being published in full in the "Transactions" of the Association for that year. I have often regretted that absence from England and pressure of work have prevented me year after year from participating in the meetings of the Association. But, being a citizen of two countries—of Germany by birth, of England by adoption—my long vacations have generally drawn me away to the Continent, so that to my great regret I found myself precluded from sharing either in your labours or in your delightful social gatherings.

I wonder whether any of those who were present at that brilliant meeting at Oxford in 1847 are present here to-day. I almost doubt it. Our President then was Sir Robert Inglis, who will always be known in the annals of English history as having been preferred to Sir Robert Peel as Member of Parliament for the University of Oxford. Among other celebrities of the day I remember Sir Roderick Murchison, Sir David Brewster, Dean Buckland, Sir Charles Lyell, Professor Sedgwick, Professor Owen, and many more—a galaxy of stars, all set or setting. Young Mr.

Ruskin acted as Secretary to the Geological Section. Our Section was then not even recognised as yet as a Section. We ranked as a sub-Section only of Section D, *Zoology and Botany*. We remained in that subordinate position till 1851, when we became Section E, under the name of *Geography and Ethnology*. From 1869, however, Ethnology seems almost to have disappeared again, being absorbed in Geography, and it was not till the year 1884 that we emerged once more as what we are to-day, Section H, or *Anthropology*.

In the year 1847 our sub-Section was presided over by Professor Wilson, the famous Sanskrit scholar. The most active debaters, so far as I remember, were Mr. Prichard, Dr. Latham, and Mr. Crawford, well known then under the name of the Objector-General. I was invited to join the meeting by Bunsen, then Prussian Minister in London, who also brought with him his friend, Dr. Karl Meyer, the Celtic scholar. Prince Albert was present at our debates, so was Prince Louis Lucien Bonaparte. Our Ethnological sub-Section was then most popular, and attracted very large audiences.

When looking once more through the debates carried on in our Section in 1847 I was very much surprised when I saw how very like the questions which occupy us to-day are to those which we discussed in 1847. I do not mean to say that there has been no advance in our science. Far from it. The advance of linguistic, ethnological, anthropological, and biological studies, all of which claim a hearing in our Section, has been most rapid. Still that advance has been steady and sustained; there has been no cataclysm, no deluge, no break in the advancement of our science, and nothing seems to me to prove its healthy growth more clearly than this uninterrupted continuity which unites the past with the present, and will, I hope, unite the present with the future.

No paper is in that respect more interesting to read than the address which Bunsen prepared for the meeting in 1847, and which you will find in the "Transactions" of that year. Its title is "On the Results of the recent Egyptian Researches in reference to Asiatic and African Ethnology, and the Classification of Languages." But you will find it a great deal more than what this title would lead you to expect.

There are passages in it which are truly prophetic, and which show that, if prophecy is possible anywhere, it is possible, nay, it ought to be possible, in the temple of science, and under the inspiring influence of knowledge and love of truth.

Allow me to dwell for a little while on this remarkable paper. It is true, we have travelled so fast that Bunsen seems almost to belong to ancient history. This very year is the hundredth anniversary of his birth, and this very day the centenary of his birth is being celebrated in several towns of Germany. In England also his memory should not be forgotten. No one, not being an Englishman by birth, could, I believe, have loved this country more warmly, and could have worked more heartily, than

Bunsen did to bring about that friendship between England and Germany which must for ever remain the corner-stone of the peace of Europe, and, as the Emperor of Germany declared the other day in his speech at the Mansion House,¹ the *sine quâ non* of that advancement of science to which our Association is devoted. His house in Carlton Terrace was a true international academy, open to all who had something to say, something worth listening to, a kind of sanctuary against vulgarity in high places, a neutral ground where the best representatives of all countries were welcome and felt at home. But this also belongs to ancient history. And yet, when we read Bunsen's paper, delivered in 1847, it does not read like ancient history. It deals with the problems which are still in the foreground, and if it could be delivered again to-day by that genial representative of German learning, it would rouse the same interest, provoke the same applause, and possibly the same opposition also, which it roused nearly half a century ago. Let me give you a few instances of what I mean.

We must remember that Darwin's "Origin of Species" was published in 1859, his "Descent of Man" in 1871. But here in the year 1847 one of the burning questions which Bunsen discusses is the question of the possible descent of man from some unknown animal. He traces the history of that question back to Frederick the Great, and quotes his memorable answer to D'Alembert. Frederick the Great, you know, was not disturbed by any qualms of orthodoxy. "In my kingdom," he used to say, "everybody may save his soul according to his own fashion." But when D'Alembert wished him to make what he called the *salto mortale* from monkey to man, Frederick the Great protested. He saw what many have seen since, that there is no possible transition from reasonlessness to reason, and that with all the likeness of their bodily organs there is a barrier which no animal can clear, or which, at all events, no animal has as yet cleared. And what does Bunsen himself consider the real barrier between man and beast? "It is language," he says, "which is unattainable, or, at least, unattained by any animal except man." In answer to the argument that, given only a sufficient number of years, a transition by imperceptible degrees from animal cries to articulate language is at least conceivable, he says: "Those who hold that opinion have never been able to show the possibility of the first step. They attempt to veil their inability by the easy but fruitless assumption of an infinite space of time, destined to explain the gradual development of animals into men; as if millions of years could supply the want of the agent necessary for the first movement, for the first step, in the line of progress! No numbers can effect a logical impossibility. How, indeed, could reason spring out of a state which is destitute of reason? How can speech, the expression of thought, develop itself, in a year, or in millions of years,

¹ "Peace alone can give the confidence which is necessary to the healthy development of science, of art, and of trade."

out of inarticulate sounds, which express feelings of pleasure, pain, and appetite?"

He then appeals to Wilhelm von Humboldt, whom he truly calls the greatest and most acute anatomist of almost all human speech. Humboldt goes so far as to say, "Rather than assign to all language a uniform and mechanical march that would lead them step by step from the grossest beginnings to their highest perfection, I should embrace the opinion of those who ascribe the origin of language to an immediate revelation of the Deity. They recognise at least that divine spark which shines through all idioms, even the most imperfect and the least cultivated."

Bunsen then sums up by saying: "To reproduce Monboddos theory in our days, after Kant and his followers, is a sorry anachronism, and I therefore regret that so low a view should have been taken of the subject lately in an English work of much correct and comprehensive reflection and research respecting natural science." This remark refers, of course, to the "Vestiges of Creation,"¹ which was then producing the same commotion which Darwin's "Origin of Species" produced in 1859.

Bunsen was by no means unaware that in the vocal expression of feelings, whether of joy or pain, and in the imitation of external sounds, animals are on a level with man. "I believe with Kant," he says, "that the formation of ideas or notions, embodied in words, presupposes the action of the senses and impressions made by outward objects on the mind." "But," he adds, "what enables us to see the genus in the individual, the whole in the many, and to form a word by connecting a subject with a predicate, is the power of the mind, and of this the brute creation exhibits no trace."

You know how for a time, and chiefly owing to Darwin's predominating influence, every conceivable effort was made to reduce the distance which language places between man and beast, and to treat language as a vanishing line in the mental evolution of animal and man. It required some courage at times to stand up against the authority of Darwin, or rather against the anathema of the Darwinian, but at present all serious thinkers agree, I believe, with Bunsen, that no animal has developed what we mean by rational language, as distinct from mere utterances of pleasure or pain, from imitation of sounds and from communication by means of various signs, a subject that has lately been treated with great fulness by my learned friend Professor Romanes in his "Mental Evolution of Man." If all true science is based on facts, the fact remains that no animal has ever formed what we mean by a language; and we are fully justified, therefore, in holding with Bunsen and Humboldt, as against Darwin and Professor Romanes, that there is a specific difference between the human animal and all other animals, and that that difference consists in language as the outward manifestation of what the Greeks meant by *Logos*.

Another question which occupies the attention of our leading

¹ See an article in the "Edinburgh Review," July, 1845.

anthropologists is the proper use to be made of the languages, customs, laws, and religious ideas of so-called savages. Some, as you know, look upon these modern savages as representing human nature in its most primitive state, while others treat them as representing the lowest degeneracy into which human nature may sink. Here, too, we have learnt to distinguish. We know that certain races have had a very slow development, and may, therefore, have preserved some traces of those simple institutions which are supposed to be characteristic of primitive life. But we also know that other races have degenerated and are degenerating even now. If we hold that the human race forms but one species, we cannot, of course, admit that the ancestors even of the most savage tribes, say of the Australians, came into the world one day later than the ancestors of the Greeks, or that they passed through fewer evolutions than their more favoured brethren. The whole of humanity would be of exactly the same age. But we know its history from a certain time only, when it had probably passed already through many ups and downs. To suppose, therefore, that the modern savage is the nearest approach to primitive man would be against all the rules of reasoning. Because in some countries, and under stress of unfavourable influences, some human tribes have learnt to feed on human flesh, it does not follow that our first ancestors were cannibals. And here, too, Bunsen's words have become so strikingly true that I may be allowed to quote them: "The savage is justly disclaimed as the prototype of natural, original man; for linguistic inquiry shows that the languages of savages are degraded and decaying fragments of nobler formations."

I know well that in unreservedly adopting Bunsen's opinion on this point also I run counter to the teaching of such well-known writers as Sir John Lubbock, Reclus, and others. It might be supposed that Mr. Herbert Spencer also looked upon savages as representing the primitive state of mankind. But if he ever did so, he certainly does so no longer, and there is nothing I admire so much in Mr. Herbert Spencer as this simple love of truth, which makes him confess openly whenever he has seen occasion to change his views. "What terms and what conceptions are truly primitive," he writes, "would be easy to determine if we had an account of truly primitive men. But there are sundry reasons for suspecting that existing men of the lowest type forming social groups of the simplest kind do not exemplify men as they originally were. Probably most of them, if not all, had ancestors in a higher state."¹

Most important also is a hint which Bunsen gives that the students of language should follow the same method which has been followed with so much success in Geology; that they should begin with studying the modern strata of speech, and then apply the principles, discovered there, to the lower or less accessible strata. It is true that the same suggestion had been made by

¹ "Open Court," No. 205, p. 2896.

Leibniz, but many suggestions are made and are forgotten again, and the merit of rediscovering an old truth is often as great as the discovery of a new truth. This is what Bunsen said: "In order to arrive at the law which we are endeavouring to find (the law of the development of language) let us first assume, as Geology does, that the same principles which we see working in the (recent) development were also at work at the very beginning, modified in degree and in form, but essentially the same in kind." We know how fruitful this suggestion has proved, and how much light an accurate study of modern languages and of spoken dialects has thrown on some of the darkest problems of the science of language. But fifty years ago it was Sanskrit only, or Hebrew, or Chinese, that seemed to deserve the attention of the students of Comparative Philology. Still more important is Bunsen's next remark, that language begins with the sentence, and that in the beginning each word was a sentence in itself. This view also has found strong supporters at a later time, for instance, my friend Professor Sayce, though at the time we are speaking of it was hardly thought of. I must here once more quote Bunsen's own words: "The supreme law of progress in all language shows itself to be the progress from the substantial isolated word, as an undeveloped expression of a whole sentence, towards such a construction of language as makes every single word subservient to the general idea of a sentence, and shapes, modifies, and dissolves it accordingly."

And again: "Every sound in language must originally have been significative of something. The unity of sound (the syllable, pure or consonantised) must therefore originally have corresponded to a unity of conscious plastic thought, and every thought must have had a real or substantial object of perception. . . . Every single word implies necessarily a complete proposition, consisting of subject, predicate, and copula."

This is a most pregnant remark. It shows as clearly as daylight the enormous difference there is between the mere utterance of the sound *Pah* and *Mah*, as a cry of pleasure or distress, and the pronunciation of the same syllable as a sentence, when *Pah* and *Mah* are meant for "This is *Pah*," "This is *Mah*"; or, after a still more characteristic advance of the human intellect, "This is a *Pah*," "This is a *Mah*," which is not very far from saying, "This man belongs to the class or genus of fathers."

Equally important is Bunsen's categorical statement that everything in language must have been originally significant, that everything formal must originally have been substantial. You know what a bone of contention this has been of late between what is called the old school and the new school of Comparative Philology. The old school maintained that every word consisted of a root and of certain derivative suffixes, prefixes, and infixes. The modern school maintained that there existed neither roots by themselves nor suffixes, prefixes, and infixes by themselves, and that the theory of agglutination—of gluing suffixes to roots—was

absurd. The old school looked upon these suffixes as originally independent and significative words; the modern school declined to accept this view except in a few irrefragable instances. I think the more accurate reasoners are coming back to the opinion held by the old school, that all formal elements of language were originally substantial, and therefore significative; that they are the remnants of predicative or demonstrative words. It is true we cannot always prove this as clearly as in the case of such words *hard-ship*, *wis-dom*, *man-hood*, where *hood* can be traced back to *hád*, which in Anglo-Saxon exists as an independent word, meaning state or quality. Nor do we often find that a suffix like *mente*, in *claramente*, *clairement*, continues to exist by itself, as when we say in Spanish *clara*, *concisa y elegantemente*. It is perfectly true that the French, when they say that a hammer falls *lourdement*, or heavily, do not deliberately take the suffix *ment*—originally the Latin *mente*, “with a mind”—and glue it to their adjective *lourd*. Here the new school has done good service in showing the working of that instinct of analogy which is a most important element in the historical development of human speech. One compound was formed in which *mente* retained its own meaning; for instance, *forti mente*, “with a brave mind.” But when this had come to mean *bravely*, and no more, the working of analogy began; and if *fortement*, from *fort*, could mean “bravely,” then why not *lourdement*, from *lourd*, “heavily”? But in the end there is no escape from Bunsen’s fundamental principle that everything in language was originally language—that is, was significative, was substantial, was material—before it became purely formal.

But it is not only with regard to these general problems that Bunsen has anticipated the verdict of our own time. Some of his answers to more special questions also show that he was right when many of his contemporaries, and even successors, were wrong. It has long been a question, for instance, whether the Armenian language belonged to the Iranic branch of the Aryan family, or whether it formed an independent branch, like Sanskrit, Persian, or Greek. Bunsen, in 1847, treated Armenian as a separate branch of Aryan speech; and that it is so was proved by Professor Hübschmann in 1883.

Again, there has been a long controversy whether the language of the Afghans belonged to the Indic or the Iranic branch. Dr. Trumpp tried to show that it belonged, by certain peculiarities, to the Indic or Sanskritic branch. Professor Darmesteter has proved but lately that it shares its most essential characteristics in common with Persian. Here, too, Bunsen guessed rightly—for I do not mean to say that it was more than a guess—when he stated that “Pushtu, the language of the Afghans, belongs to the Persian branch.”

I hope you will forgive me for having detained you so long with a mere retrospect. I could not deny myself the satisfaction of paying this tribute of gratitude and respect to my departed friend,

Baron Bunsen. To have known him belongs to the most cherished recollections of my life. But though I am myself an old man—much older than Bunsen was at our meeting in 1847—do not suppose that I came here as a mere *laudator temporis acti*. Certainly not. If one tries to recall what Anthropology was in 1847, and then considers what it is now, its progress seems most marvellous. I do not think so much of the new materials which have been collected from all parts of the world. These last fifty years have been an age of discovery in Africa, in Central Asia, in America, in Polynesia, and in Australia, such as can hardly be matched in any previous century.

But what seems to be even more important than the mere increase of material is the new spirit in which Anthropology has been studied during the last generation. I do not mean to depreciate the labours of so-called *dilettanti*. After all, *dilettanti* are lovers of knowledge, and in a study such as the study of Anthropology the labours of these volunteers, or *franc-tireurs*, have often proved most valuable. But the study of man in every part of the world has ceased to be a subject for curiosity only. It has been raised to the dignity, but also to the responsibility, of a real science, and it is now guided by principles as strict and as rigorous as any other science—such as Zoology, Botany, Mineralogy, and all the rest. Many theories which were very popular fifty years ago are now completely exploded; nay, some of the very principles by which our science was then guided have been discarded. Let me give you one instance—perhaps the most important one—as determining the right direction of anthropological studies.

At our meeting in 1847 it was taken for granted that the study of Comparative Philology would be in future the only safe foundation for the study of Anthropology. Linguistic Ethnology was a very favourite term used by Bunsen, Prichard, Latham, and others. It was, in fact, the chief purpose of Bunsen's paper to show that the whole of mankind could be classified according to language. I protested against this view at the time, and in 1853 I published my formal protest in a letter to Bunsen, "On the Turanian Languages." In a chapter called "Ethnology *versus* Phonology" I called, if not for a complete divorce, at least for a judicial separation between the study of Philology and the study of Ethnology. "Ethnological race," I said, "and phonological race are not commensurate, except in ante-historical times, or, perhaps, at the very dawn of history. With the migration of tribes, their wars, their colonies, their conquests and alliances, which, if we may judge from their effects, must have been much more violent in the ethnic than ever in the political periods of history, it is impossible to imagine that race and language should continue to run parallel. The physiologist should pursue his own science, unconcerned about language. Let him see how far the skulls, or the hair, or the colour of the skin of different tribes admit of classification; but to the sound of their words his ear

should be as deaf as that of the ornithologist's to the notes of caged birds. If his Caucasian class includes nations or individuals speaking Aryan (Greek), Turanian (Turkish), and Semitic (Hebrew) languages, it is not his fault. His system must not be altered to suit another system. There is a better solution both for his difficulties and for those of the phonologist than mutual compromise. The phonologist should collect his evidence, arrange his classes, divide and combine as if no Blumenbach had ever looked at skulls, as if no Camper had ever measured facial angles, as if no Owen had ever examined the basis of a cranium. His evidence is the evidence of language, and nothing else; this he must follow, even though in the teeth of history, physical, or political. . . . There ought to be no compromise between ethnological and phonological science. It is only by stating the glaring contradictions between the two that truth can be elicited."

At first my protest met with no response; nay, curiously enough, I have often been supposed to be the strongest advocate of the theory which I so fiercely attacked. Perhaps I was not entirely without blame, for, having once delivered my soul, I allowed myself occasionally the freedom to speak of the Aryan or the Semitic race, meaning thereby no more than the people, whoever and whatever they were, who spoke Aryan or Semitic languages. I wish we could distinguish in English as in Hebrew between *nations and languages*. Thus in the Book of Daniel iii. 4, "the herald cried aloud . . . O people, nations, and languages." Why then should we not distinguish between nations and languages? But to put an end to every possible misunderstanding, I declared at last that to speak of "an Aryan skull would be as great a monstrosity as to speak of a dolichocephalic language."

I do not mean to say that this old heresy, which went by the name of linguistic ethnology, is at present entirely extinct. But among all serious students, whether physiologists or philologists, it is by this time recognised that the divorce between Ethnology and Philology, granted if only for incompatibility of temper, has been productive of nothing but good.

Instead of attempting to classify mankind as a whole, students are now engaged in classing skulls, in classing hair, and teeth, and skin. Many solid results have been secured by these special researches; but, as yet, no two classifications, based on these characteristics, have been made to run parallel.

The most natural classification is, no doubt, that according to the colour of the skin. This gives us a black, a brown, a yellow, a red, and a white race, with several subdivisions. This classification has often been despised as unscientific; but it may still turn out far more valuable than is at present supposed.

The next classification is that by the colour of the eyes, as black, brown, hazel, grey, and blue. This subject also has attracted much attention of late, and, within certain limits, the results have proved very valuable.

The most favourite classification, however, has always been that

according to the skulls. The skull, as the shell of the brain, has by many students been supposed to betray something of the spiritual essence of man; and who can doubt that the general features of the skull, if taken in large averages, do correspond to the general features of human character? We have only to look round to see men with heads like a cannon-ball, and others with heads like a hawk. This distinction has formed the foundation for a more scientific classification into *brachycephalic*, *dolichocephalic*, and *mesocephalic* skulls. The proportion of 80: 100 between the transverse and longitudinal diameter gives us the ordinary or mesocephalic type, the proportion of 75: 100 the dolichocephalic, the proportion of 85: 100 the brachycephalic type. The extremes are 70: 100 and 90: 100.

If we examine any large collection of skulls, we have not much difficulty in arranging them under these three classes; but if, after we have done this, we look at the nationality of each skull, we find the most hopeless confusion. Pruner Bey, as Peschel tells us in his "*Völkerkunde*," has observed brachycephalic and dolichocephalic skulls in children born of the same mother; and if we consider how many women have been carried away into captivity by Mongolians in their inroads into China, India, and Germany, we cannot feel surprised if we find some longheads among the roundheads of those Central Asiatic hordes.

Only we must not adopt the easy expedient of certain anthropologists who, when they find dolichocephalic and brachycephalic skulls in the same tomb, at once jump to the conclusion that they must have belonged to two different races. When, for instance, two dolichocephalic and three brachycephalic skulls were discovered in the same tomb at Alexandropol, we were told at once that this proved nothing as to the simultaneous occurrence of different skulls in the same family; nay, that it proved the very contrary of what it might seem to prove. It was clear, we were assured, that the two dolichocephalic skulls belonged to Aryan chiefs and the three brachycephalic skulls to the non-Aryan slaves, who were killed and buried with their masters, according to a custom well known to Herodotus. This sounds very learned, but is it really quite straightforward?

Besides the general division of skulls into dolichocephalic, brachycephalic, and mesocephalic, other divisions have been undertaken, according to the height of the skull, and again, according to the maxillary and the facial angles. This latter division gives us *orthognathic*, *prognathic*, and *mesognathic* skulls.

Lastly, according to the peculiar character of the hair, we may distinguish two great divisions, the people with woolly hair (*Ulotriches*) and people with smooth hair (*Lissotriches*). The former are subdivided into *Lophocomi*, people with tufts of hair, and *Eriocomi*, or people with fleecy hair. The latter are divided into *Euthycomi*, straight-haired, and *Euplocami*,¹ wavy-haired. It has

¹ Not *Euplo-comic*, wavy-haired, as Brinton gives it.

been shown that these peculiarities of the hair depend on the peculiar form of the hair-tubes, which, in cross-sections, are found to be either round or elongated in different ways.

Now all these classifications, to which several more might be added, those according to the orbits of the eyes, the outlines of the nose, the width of the pelvis, are by themselves extremely useful. But few of them only, if any, run strictly parallel. It has been said that all dolichocephalic races are prognathic, and have woolly hair. I doubt whether this is true without exception; but even if it were, it would not allow us to draw any genealogical conclusions from it, because there are certainly many dolichocephalic people who are not woolly-haired, as, for instance, the Eskimos.¹

Now let us consider whether there can be any organic connection between the shape of the skull, the facial angle, the conformation of the hair, or the colour of the skin on one side, and what we call the great families of language on the other. That we speak at all may rightly be called a work of nature, *opera naturale*, as Dante said long ago; but that we speak thus or thus, *così o così*, that, as the same Dante said, depends on our pleasure—that is, our work. To imagine, therefore, that as a matter of necessity, or as a matter of fact, dolichocephalic skulls have anything to do with Aryan, mesocephalic with Semitic, or brachycephalic with Turanian speech, is nothing but the wildest random thought; it can convey no rational meaning whatever. We might as well say that all painters are dolichocephalic, and all musicians brachycephalic, or that all lophocomic tribes work in gold, and all lissocomic tribes in silver.

If anything must be ascribed to prehistoric times, surely the differentiation of the human skull, the human hair, and the human skin, would have to be ascribed to that distant period. No one, I believe, has ever maintained that a mesocephalic skull was split or differentiated into a dolichocephalic and a brachycephalic variety in the bright sunshine of history.

But let us, for the sake of argument, assume that in prehistoric times all dolichocephalic people spoke Aryan, all mesocephalic, Semitic, all brachycephalic, Turanian languages; how would that help us?

So long as we know anything of the ancient Aryan, Semitic, and Turanian languages, we find foreign words in each of them. This proves a very close and historical contact between them. For instance, in Babylonian texts of 3000 B.C. there is the word *sindhu* for cloth made of vegetable fibres, linen. That can only be the Sk. *sindhu*, the Indus, or *saindhava*, what comes from the Indus. It would be the same word as the Homeric *σινδών*, fine cloth.² In Egyptian we find so many Semitic words that it is difficult to say whether they were borrowed or derived from a common source. I confess I am not convinced, but Egyptologists of high authority assure us that the names of several Aryan peoples, such as the Sicilians and Sardinians, occur in the fourteenth century B.C.,

¹ Brinton, "Races of People," p. 249.

² "Physical Religion," p. 87.

in the inscriptions of the time of Menephthah I. Again, as soon as we know anything of the Turanian languages—Finnish for instance—we find them full of Aryan words. All this, it may be said, applies to a very recent period in the ancient history of humanity. Still, we have no access to earlier documents, and we may fairly say that this close contact which existed then existed probably at an earlier time also.

If, then, we have no reason to doubt that the ancestors of the people speaking Aryan, Semitic, and Turanian languages lived in close proximity, would there not have been marriages between them, so long as they lived in peace, and would they not have killed the men and carried off the women in time of war? What, then, would have been the effect of a marriage between a dolichocephalic mother and a brachycephalic father? The materials for studying this question of *métissage*, as the French call it, are too scanty as yet to enable us to speak with confidence. But whether the paternal or the maternal type prevailed, or whether their union gave rise to a new permanent variety, still it stands to reason that the children of a dolichocephalic captive woman might be found, after fifty or sixty years, speaking the language of the brachycephalic conquerors.

It has been the custom to speak of the early Aryan, Semitic, and Turanian races as large swarms—as millions pouring from one country into another. It has been calculated that these early nomads would have required immense tracts of meadow land to keep their flocks, and that it was the search of new pastures that drove them, by an irresistible force, over the whole inhabitable earth.

This may have been so, but it may also have not been so. Anyhow, we have a right to suppose that, before there were millions of human beings, there were at first a few only. We have been told of late that there never was a first man; but we may be allowed to suppose, at all events, that there were at one time a few first men and a few first women. If, then, the mixture of blood by marriage and the mixture of language in peace or war took place at that early time, when the world was peopled by some individuals, or by some hundreds, or by some thousands only, think only what the necessary result would have been. It has been calculated that it would require only 600 years to populate the whole earth with the descendants of one couple, the first father being dolichocephalic and the first mother brachycephalic. They might, after a time, all choose to speak an Aryan language, but they could not choose their skulls, but would have to accept them from nature, whether dolichocephalic or brachycephalic.

Who, then, would dare at present to lift up a skull and say this skull must have spoken an Aryan language, or lift up a language and say this language must have been spoken by a dolichocephalic skull? Yet, though no serious student would any longer listen to such arguments, it takes a long time before theories that were maintained for a time by serious students, and were then sur-

rendered by them, can be completely eradicated. I shall not touch to-day on the hackneyed question of the "Home of the Aryans," except as a warning. There are two quite distinct questions concerning the home of the Aryans.

When students of Philology speak of Âryas they mean by Âryas nothing but people speaking in Aryan language. They affirm nothing about skulls, skins, hair, and all the rest. Ârya with them means speakers of an Aryan language. When, on the contrary, students of Physiology speak of dolichocephalic, orthognatic, eutycomic people, they speak of their physiological characteristics only, and affirm nothing whatever about language.

It is clear, therefore, that the home of the Âryas, in the proper sense of that word, can be determined by linguistic evidence only, while the home of a blue-eyed, blond-haired, long-skulled, fair-skinned people can be determined by physiological evidence only. Any kind of concession or compromise on either side is simply fatal, and has led to nothing but a promiscuous slaughter of innocents. Separate the two armies, and the whole physiological evidence collected by D'Omalius d'Halloy, Latham, and their followers will not fill more than an octavo page: while the linguist evidence collected by Benfey and his followers will not amount to more than a few words. Everything else is mere rhetoric.

The physiologist is grateful, no doubt, for any additional skull whose historical antecedents can be firmly established; the philologist is grateful for any additional word that can help to indicate the historical or geographical whereabouts of the unknown speakers of Aryan speech. On these points it is possible to argue. They alone have a really scientific value in the eyes of a scholar, because, if there is any difference of opinion on them, it is possible to come to an agreement. As soon, however, as we go beyond these mere matters of fact, which have been collected by real students, everything becomes at once mere vanity and vexation of spirit. I know the appeals that have been made for concessions and some kind of compromise between Physiology and Philology; but honest students know that on such a compromise is admissible. With regard to the home of the Aryans, no honest philologist will allow himself to be driven one step beyond the statement that the unknown people who spoke Aryan languages were, at one time, and before their final separation, settled somewhere in Asia. That may seem very small comfort, but for the present it is all we have a right to say. Even this must be taken with the limitations which, as all true scholars know, apply to speculations concerning what may have happened, say, five thousand or ten thousand years ago. As to the colour of the skin, the hair, the eyes of those unknown speakers of Aryan speech, the scholar says nothing; and when he speaks of their blood he knows that such a word can be taken in a metaphorical sense only. If we once step from the narrow domain of science into the vast wilderness of mere assertion, then it does not matter what we say. We may say, with Penka, that all Âryas are dolichocephalic, blue-eyed, and blond, or we may say, with Piétremeret,

that all Âryas are brachycephalic, with brown eyes and black hair.¹ There is no difference between the two assertions. They are both perfectly unmeaning. They are *vox et præterea nihil*. May I be allowed to add that Latham's theory of the European origin of Sanskrit, which has lately been represented as marking the nearest epoch in the study of Anthropology, was discussed by me in the *Edinburgh Review* of 1851.

My experiences during the last forty years have only served to confirm the opinion which I expressed forty years ago, that there ought to be a complete separation between Philology and Physiology. And yet, if I were asked whether such a divorce should now be made absolute, I should say, No. There have been so many unexpected discoveries of new facts, and so many surprising combinations of old facts, that we must always be prepared to hear some new evidence, if only that evidence is brought forward according to the rules which govern the court of true science. It may be that in time the classification of skulls, hair, eyes, and skin may be brought into harmony with the classification of language. We may even go on so far as to admit, as a postulate, that the two must have run parallel, at least in the beginning of all things. But with the evidence before us at present, mere wrangling, mere iteration of exploded assertions, mere contradictions, will produce no effect on that true jury which in every country hardly ever consists of more than twelve trusty men, but with whom the final verdict rests. The very things that most catch the popular ear will by them be ruled out of court. But every single new word, common to all the Aryan languages, and telling of some climatic, geographical, historical, or physiological circumstance in the earliest life of the speakers of Aryan speech, will be truly welcome to philologists quite as much as a skull from an early geological stratum is to the physiologist, and both to the anthropologist, in the widest sense of that name.

But, if all this is so, if the alliance between Philology and Physiology has hitherto done nothing but mischief, what right, it may be asked, had I to accept the honour of presiding over this section of Anthropology? If you will allow me to occupy your valuable time a little longer, I shall explain, as shortly as possible, why I thought that I, as a philologist, might do some small amount of good as President of the Anthropological Section.

In spite of all that I have said against the unholy alliance between Physiology and Philology, I have felt for years—and I believe I am now supported in my opinion by all competent anthropologists—that a knowledge of languages must be considered in future as a *sine quâ non* for every anthropologist.

Anthropology, as you know, has increased so rapidly that it seems to say now, *Nihil humani a me alienum puto*. So long as Anthropology treated only of the anatomy of the human body, any surgeon might have become an excellent anthropologist. But now, when Anthropology includes the study of the earliest thoughts of

¹ V. de Gheyn, 1889, p. 26.

man, his customs, his laws, his traditions, his legends, his religions, aye, even his early philosophies, a student of Anthropology without an accurate knowledge of languages, and, what is even more important, without the conscience of a scholar, is like a sailor without a compass.

No one disputes this with regard to nations who possess a literature. No one would listen to a man describing the peculiarities of the Greek, the Roman, the Jew, the Arab, the Chinese, without knowing their languages, and being capable of reading the master-works of their literature. We know how often men who have devoted the whole of their life to the study, for instance, of Hebrew differ not only as to the meaning of certain words and passages, but as to the very character of the Jews. One authority states that the Jews, and not only the Jews, but all Semitic nations, were possessed of a monotheistic instinct. Another authority shows that all Semitic nations, not excluding the Jews, were polytheistic in their religion, and that the Jehovah of the Jews, we are told, was not conceived at first as the Supreme Deity, but as a national God only, as the God of the Jews, who, according to the latest view, was originally a fetish or a totem, like all other gods.

You know how widely classical scholars differ on the character of Greeks and Romans, on the meaning of their customs, the purpose of their religious ceremonies—nay, the very essence of their gods. And yet there was a time, not very long ago, when anthropologists would rely on the descriptions of casual travellers, who, after spending a few weeks, or even a few years, among tribes whose language was utterly unknown to them, gave the most marvellous accounts of their customs, their laws, their folk-lore, and even of their religion. It may be said that anybody can describe what he sees, even though unable to converse with the people. I say, Decidedly no; and I am supported in this opinion by the most competent judges. Dr. Codrington, who has just published his excellent book on the "Melanesians: Their Anthropology and Folk-lore," spent twenty-four years among the Melanesians, learning their dialects, collecting their legends, and making a systematic study of their laws, customs, and superstitions. But what does he say in his preface? "I have felt the truth," he says, "of what Mr. Fison, late missionary in Fiji, has written: 'When a European has been living for two or three years among savages, he is sure to be fully convinced that he knows all about them; when he has been ten years or so amongst them, if he be an observant man, he finds that he knows very little about them, and so begins to learn.'"

How few of the books in which we trust with regard to the characteristic peculiarities of savage races have been written by men who have lived among them for ten or twenty years, and who have learnt their languages till they could speak them as well as the natives themselves.

It is no excuse to say that any traveller who has eyes to see and

ears to hear can form a correct estimate of the doings and sayings of savage tribes. It is not so, and anthropologists know from sad experience that it is not so. Suppose a traveller came to a camp where he saw thousands of men and women dancing round the image of a young bull. Suppose that the dancers were all stark naked, that after a time they began to fight, and that at the end of their orgies there were three thousand corpses lying about weltering in their blood. Would not a casual traveller have described such savages as worse than the negroes of Dahomey? Yet these savages were really the Jews, the chosen people of God. The image was the golden calf, the priest was Aaron, and the chief who ordered the massacre was Moses. We may read the 32nd chapter of Exodus in a very different sense. A traveller who could have conversed with Aaron and Moses might have understood the causes of the revolt and the necessity of the massacre. But without this power of interrogation and mutual explanation, no travellers, however graphic and amusing their stories may be, can be trusted; no statements of theirs can be used by the anthropologist for truly scientific purposes.

From the day when this fact was recognized by the highest authorities in Anthropology, and was sanctioned by some at least of our anthropological, ethnological, and folk-lore societies, a new epoch began, and Philology received its right place as the handmaid of Anthropology. The most important paragraph in our new charter was this, that in future no one is to be quoted or relied on as an authority on the customs, traditions, and more particularly on the religious ideas of uncivilised races who has not acquired an acquaintance with their language, sufficient to enable him to converse with them freely on these difficult subjects.

No one would object to this rule when we have to deal with civilised and literary nations. But the languages of Africa, America, Polynesia, and even Australia are now being studied as formerly Greek, Latin, Hebrew, and Sanskrit only were studied. You have only to compare the promiscuous descriptions of the Hottentots in the works of the best ethnologists with the researches of a real Hottentot scholar like Dr. Hahn to see the advance that has been made. When we read the books of Bishop Callaway on the Zulu, of William Gill and Edward Tregear on the Polynesians, of Horatio Hale on some of the North American races, we feel at once that we are in safe lands, in the hands of real scholars. Even then we must, of course, remember that their knowledge of the languages cannot compare with that of Bentley, or Hermann, or Burnouf, or Ewald. Yet we feel that we cannot go altogether wrong in trusting to their guidance.

I venture to go even a step further, and I believe the time will come when no anthropologist will venture to write on anything concerning the inner life of man without having himself acquired a knowledge of the language in which that inner life finds its truest expression.

This may seem to be exacting too much, but you have only to

look, for instance, at the description given of the customs, the laws, the legends, and the religious convictions of the people of India about a hundred years ago, and before Sanskrit began to be studied, and you will be amazed at the utter caricature that is often given there of the intellectual state of the Brahmans compared with what we know of it now from their own literature.

And if that is the case with a people like the Indians, who are a civilised race, possessed of an ancient literature, and well within the focus of history for the last two thousand years, what can be expected in the case of really savage races! One can hardly trust one's eyes when one sees the evidence placed before us by men whose good faith cannot be questioned, and who nevertheless contradict each other flatly on the most ordinary subjects. We owe to one of our secretaries, Mr. Roth, a most careful collection of all that has been said on the Tasmanians by eye-witnesses. Not the least valuable part of this collection is that it opens our eyes to the utter untrustworthiness of the evidence on which the anthropologist has so often had to rely. In an article on Mr. Roth's book in "*Nature*," I tried to show that there is not one essential feature in the religion of the Tasmanians on which different authorities have not made assertions diametrically opposed to each other. Some say that the Tasmanians have no idea of a Supreme Being, no rites or ceremonies; others call their religion Dualism, a worship of good and evil spirits. Some maintain that they had deified the powers of nature, others that they were Devil-worshippers. Some declare their religion to be pure monotheism, combined with belief in the immortality of the soul, the efficacy of prayers and charms. Nay, even the most recent article of faith, the descent of man from some kind of animal, has received a religious sanction among the Tasmanians. For Mr. Horton, who is not given to joking, tells us that they believed "they were originally formed with tails, and without knee-joints, by a benevolent being, and that another descended from heaven and . . . the sufferers, cut off their tails, and with grease . . . es.

I would undertake to show that what applies to the descriptions given us of the now extinct race of the Tasmanians applies with equal force to the descriptions of almost all the savage races with whom anthropologists have to deal. In the case of large tribes, such as the inhabitants of Australia, the contradictory evidence may, no doubt, be accounted for by the fact that the observations were made in different localities. But the chief reason is always the same—ignorance of the language, and therefore want of sympathy and impossibility of mutual explanation and correction.

Let me in conclusion give you one of the most flagrant instances of how a whole race can be totally misrepresented by men ignorant of their language, and how these misrepresentations are at once removed if travellers acquire a knowledge of the language, and thus have not only eyes to see, but ears to hear, tongues to speak, and hearts to feel.

No race has been so cruelly maligned for centuries as the inhabi-

tants of the Andaman Islands. An Arab writer of the ninth century states that their complexion was frightful, their hair frizzled, their countenance and eyes terrible, their feet very large, and almost a cubit in length, and that they go quite naked. Marco Polo (about 1285) declared that the inhabitants are no better than wild beasts, and he goes on to say: "I assure you, all the men of this island of Angamanain have heads like dogs, and teeth and eyes likewise; in fact, in the face they are just like big mastiff dogs."

So long as no one could be found to study their language there was no appeal from these libels. But when, after the Sepoy Mutiny in 1857, it was necessary to find a habitation for a large number of convicts, the Andaman Islands, which had already served as a penal settlement on a smaller scale, became a large penal colony under English officers. The havoc that was wrought by this sudden contact between the Andaman Islanders and these civilised Indian convicts was terrible, and the end will probably be the same as in Tasmania—the native population will die out. Fortunately one of the English officers (Mr. Edward Horace Man) did not shrink from the trouble of learning the language spoken by these islanders, and, being a careful observer and perfectly trustworthy, he has given us some accounts of the Andaman aborigines which are real masterpieces of anthropological research. If these islanders must be swept away from the face of the earth, they will now at all events leave a good name behind them. Even their outward appearance seems to become different in the eyes of a sympathising observer from what it was to casual travellers. They are, no doubt, a very small race, their average height being 4 ft. 10 $\frac{3}{4}$ in. But this is almost the only charge brought against them which Mr. Man has not been able to rebut. Their hair, he says, is fine, very closely curled, and frizzly. Their colour is dark, but not absolutely black. Their features possess little of the most marked and coarser peculiarities of the negro type. The projecting jaws, the prominent thick lips, the broad and flattened nose of the genuine negro are so softened down as scarcely to be recognised.

But let us hear now what Mr. Man has to tell us about the social, moral, and intellectual qualities of these so-called savages who had been represented to us as cannibals; as ignorant of the existence of a deity; as knowing no marriage—except what by a bold euphemism has been called communal marriage; as unacquainted with fire; as no better than wild beasts, having heads, teeth, and eyes like dogs—being, in fact, like big mastiffs.

"Before the introduction into the islands of what is called European civilisation, the inhabitants," Mr. Man writes, "lived in small villages, their dwellings built of branches and leaves of trees. They were ignorant of agriculture, and kept no poultry or domestic animals. Their pottery was hand-made, their clothing very scanty. They were expert swimmers and divers, and able to manufacture well-made dug-out canoes and outriggers. They

were ignorant of metals, ignorant, we are told, of producing fire, though they kept a constant supply of burning and smouldering wood. They made use of shells for their tools, had stone hammers and anvils, bows and arrows, harpoons for killing turtle and fish. Such is the fertility of the island that they have abundance and variety of food all the year round. Their food was invariably cooked, they drank nothing but water, and they did not smoke. People may call this a savage life. I know many a starving labourer who would gladly exchange the benefits of European civilisation for the blessings of such savagery."

These small islanders who have always been represented by a certain class of anthropologists as the lowest stratum of humanity need not fear comparison, so far as their social life is concerned, with races who are called civilised. So far from being addicted to what is called by the self-contradictory name of communal marriage, Mr. Man tells us that bigamy, polygamy, polyandry, and divorce are unknown to them, and that the marriage contract, so far from being regarded as a merely temporary contract, to be set aside on account of incompatibility of temper or other such causes, is never dissolved. Conjugal fidelity till death is not the exception but the rule, and matrimonial differences, which occur but rarely, are easily settled with or without the intervention of friends. One of the most striking features of their social relations is the marked equality and affection which exist between husband and wife, and the consideration and respect with which women are treated might, with advantage, be emulated by certain classes in our own land. As to cannibalism or infanticide, they are never practised by them.

It is easy to say that Mr. Man may be prejudiced in favour of these little savages, whose language he has been at so much pains to learn. Fortunately, however, all his statements have lately been confirmed by another authority—Colonel Cadell, the Chief Commissioner of these islands. He is a Victoria Cross, and not likely to be given to over much sentimentality. Well, this is what he says of these fierce mastiffs, with feet a cubit in length:—

"They are merry little people," he says. "One could not imagine how taking they were. Everyone who had to do with them fell in love with them (these fierce mastiffs). Contact with civilisation had not improved the morality of the natives, but in their natural state they were truthful and honest, generous and self-denying. He had watched them sitting over their fires cooking their evening meal, and it was quite pleasant to notice the absence of greed and the politeness with which they picked off the tit-bits and thrust them into each other's mouths. The forest and sea abundantly supplied their wants, and it was therefore not surprising that the attempts to induce them to take to cultivation had been quite unsuccessful, highly though they appreciated the rice and Indian corn which were occasionally supplied to them. All was grist that came to their mill in the shape of food. The

forest supplied them with edible roots and fruits. Bats, rats, flying-foxes, iguanas, sea-snakes, molluscs, wild pig, fish, turtle, and last, though not least, the larvæ of beetles, formed welcome additions to their larder. He remembered one morning landing by chance at an encampment of theirs, under the shade of a gigantic forest tree. On one fire was the shell of a turtle, acting as its own pot, in which was simmering the green fat delicious to more educated palates; on another its flesh was being broiled, together with some splendid fish; on a third a wild pig was being roasted, its drippings falling on wild yams, and a jar of honey stood close by, all delicacies fit for an alderman's table."

These are things which we might suppose anybody who has eyes to see, and who is not wilfully blind, might have observed; but when we come to traditions, laws, and particularly to religion, no one ought to be listened to as an authority who cannot converse with the natives. For a long time the Mincopies have been represented as without any religion, without even an idea of the Godhead. This opinion received the support of Sir John Lubbock, and has been often repeated without ever having been re-examined. As soon, however, as these Mincopies began to be studied more carefully—more particularly as soon as some persons resident among them had acquired a knowledge of their language, and thereby a means of real communication—their religion came out as clear as daylight. According to Mr. E. H. Mau, they have a name for God—*Pûluga*. And how can a race be said to be without a knowledge of God if they have a name for God? *Pûluga* has a very mythological character. He has a stone house in the sky; he has a wife, whom he created himself, and from whom he has a large family, all, except the eldest, being girls. The mother is supposed to be green (the earth?), the daughters black; they are the spirits, called *Mórowin*; his son is called *Pijchor*. He alone is permitted to live with his father and to convey his orders to the *Mórowin*. But *Pûluga* was a moral character also. His appearance is like fire, though nowadays he has become invisible. He was never born, and is immortal. The whole world was created by him, except only the powers of evil. He is omniscient, knowing even the thoughts of the heart. He is angered by the commission of certain sins—some very trivial, at least to our mind—but he is pitiful to all who are in distress. He is the judge from whom each soul receives its sentence after death.

According to other authorities, some Andamanese look on the sun as the fountain of all that is good, the moon as a minor power; and they believe in a number of inferior spirits, the spirits of the forest, the water, and the mountain, as agents of the two higher powers. They believe in an evil spirit also, who seems to have been originally the spirit of the storm. Him they try to pacify by songs, or to frighten away with their arrows.

I suppose I need say no more to show how indispensable a study of language is to every student of Anthropology. If Anthropology is to maintain its high position as a real science, not as a mere

collection of amusing anecdotes, its alliance with linguistic studies cannot be too close. Its weakest points have always been those where it trusted to the statements of authorities ignorant of language and of the science of language. Its greatest triumphs have been achieved by men such as Dr. Hahn, Bishops Callaway and Colenso, Dr. W. Gill, and last, not least, Mr. Man, who have combined the minute accuracy of the scholar with the comprehensive grasp of the anthropologist, and were thus enabled to use the key of language to unlock the perplexities of savage customs, savage laws and legends, and, particularly, of savage religions and mythologies. If this alliance between Anthropology and Philology becomes real, then, and then only, may we hope to see Bunsen's prophecy fulfilled, that Anthropology will become the highest branch of that science for which this British Association is instituted.

Allow me in conclusion once more to quote some prophetic words from the Address which Bunsen delivered before our Section in 1847:—

"If man is the apex of the creation it seems right, on the one side, that historical inquiry into his origin and development should never be allowed to sever itself from the general body of natural science, and in particular from Physiology. But, on the other side, if man is the apex of the creation, if he is the end to which all organic formations tend from the very beginning, if man is at once the mystery and the key of natural science, if that is the only view of natural science worthy of our age, then Ethnological Philology (I should prefer to say Anthropology), once established on principles as clear as the physiological are, is the highest branch of that science for the advancement of which this Association is instituted. It is not an appendix to Physiology or to anything else; but its object is, on the contrary, capable of becoming the end and goal of the labours and transactions of a scientific association."

Much has been achieved by Anthropology to justify these hopes and fulfil the prophecies of my old friend Bunsen. Few men live to see the fulfilment of their own prophecies, but they leave disciples whose duty it is to keep their memory alive, and thus to preserve that vital continuity of human knowledge which alone enables us to see in the advancement of all science the historical evolution of eternal truth.

Works of Professor Wilken.

The following list of published papers of the late Professor G. A. Wilken, of the University of Leyden, will be of service to anthropologists. Besides the acknowledged importance of these writings as studies of special problems, they have a particular value as being largely based on the excellent materials relating to the Dutch East Indies which have been collected by Dutch officials, missionaries,

and travellers during the last generation. Much of the best results of this voluminous literature is extracted and generalized by Prof. Wilken, whose writings incidentally form the best guide to the anthropology of the Malay Archipelago. Separate copies of some of the papers may be had through the Dutch booksellers.

De Simsonsage. [Legend of Samson.] ("De Gids," 1888, No. 5.)
 Huwelijken tusschen Bloedverwanten. [Marriages between Blood relations.] (*Ibid.*, 1890, No. 6.)

Over de primitieve vormen van het huwelijk en den oorsprong van het gezin. [On Primitive Forms of Marriage and Origin of the Family.] ("De Indische Gids," 1880-81.)

Over de verwantschap en het huwelijks en erfrecht bij de volken van het Maleische ras. [On Relationship and the Law of Marriage and Inheritance of the Malay Race.] (*Ibid.*, May 1883. Amsterdam: De Bussy.)

Het matriarchat bij de oude Arabieren. [Matriarchate among the ancient Arabs.] (*Ibid.*, Jan. 1884. Amsterdam: De Bussy.)

Het animisme bij de Volken van den Indischen archipel. [Animism among the peoples of the Indian Archipelago.] (*Ibid.*, 1884-85. Amsterdam: De Bussy.)

De betrekking tusschen Menschen Dieren en Plantenleven naar het Volksgeloof. [The relation between Human, Animal, and Vegetable Life in Popular Belief.] (*Ibid.*, 1884. Amsterdam: De Bussy.)

Het strafrecht bij de volken van het Maleische ras. [Criminal Law of the Malay Race.] *Leiden*, Orientalists' Congress, 1883. ("Bijdragen tot de Taal-Land-en Volkenkunde van Nederlandsch-Indië." The Hague; Nijhoff, 1883.)

De besnijdenis bij de volken van den Indischen Archipel. [Circumcision in the Indian Archipelago.] (*Ibid.*, IV Series, Part X.)

Eenige opmerkingen, naar aanleiding eener critiek van mijn "Matriarchat bij de oude Arabieren." [Remarks on Critique of "Matriarchate among the Ancient Arabs."] (*Ibid.*, IV Series, Part X.)

Plechtigheden en gebruiken bij verlovingsen en huwelijken bij de volken van den Indischen Archipel, I & II. [Ceremonies and Customs at Betrothals and Marriages in the Indian Archipelago.] (*Ibid.*, V Series, Parts I, IV.)

Het tellen bij nachten bij dee volken van het Maleisch-Polynesische ras. [Counting by nights among the Malayo-Polynesian Race.] (V Series, Part I.)

Iets over de beteekenis van de ithyphallische beelden bij de volken van den Indischen Archipel. [Signification of Ithyphallic Figures of the Indian Archipelago.] (*Ibid.*, V Series, Part I.)

Het shamanisme bij de volken van den Indischen Archipel.

- [Shamanism in the Indian Archipelago.] (*Ibid.*, V Series, Part II.)
- Iets over de Papuwa's van de Gulvinksbaai. [Papuas of Geelvink Bay.] (*Ibid.*, V Series, Part II.)
- Oostersche en Westersche rechtsbegrippen. [Eastern and Western Legal Ideas.] (*Ibid.*, V Series, Part III.)
- De verbreiding van het matriarchaat op Sumatra. [Diffusion of the Matriarchate in Sumatra.] (*Ibid.*, V Series, Part III.)
- Iets over de mutilatie der tanden bij de volken van den Indischen Archipel. [On the Mutilation of the teeth in the Indian Archipelago.] (*Ibid.*, V Series, Part III.)
- Het pandrecht bij de volken van den Indischen Archipel. [Law of Pledge in the Indian Archipelago.] (*Ibid.*, V Series, Part III.)
- Iets over de schedelvereering bij de volken van den Indischen Archipel. [Skull worship in the Indian Archipelago.] (*Ibid.*, V Series, Part IV.)
- De couvade bij de volken van den Indischen Archipel. [Couvade in the Indian Archipelago.] (*Ibid.*, V Series, part IV.)
- Albinos in den Indischen Archipel. [Albinos in the Indian Archipelago.] (*Ibid.*, V Series, Part V.)
- Struma en cretinisme in den Indischen Archipel. [Scrofula and Cretinism in the Indian Archipelago.] (*Ibid.*, V Series, Part V.)
- Over het huwelijks en erfrecht bij de volken van Zuid-Sumatra. [Law of Marriage and Inheritance in South Sumatra.] (*Ibid.*, V Series, Part VI.)
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- Ueber das Haaropfer und andere Trauergebräuche bei den Völkern Indonesiens. [Sacrifice of Hair and other Mourning Customs in Indonesia.] (*Revue Coloniale Internationale*, 1886-7.)
- Over de verwantschap en het huwelijks en erfrecht bij de volken van den Indischen Archipel. [Relationship and Law of Marriage and Inheritance in the Indian Archipelago.] (Leiden: Brill, 1883.)
- De vrucht van de beoefening der Ethnologie voor de vergelijkende rechtswetenschap. [Effect of the Study of Ethnology on Comparative Jurisprudence.] (Leiden: Brill, 1885.)
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- Landbezit in de Minahasa. Landverkoop in de Minahasa. [Tenure and Sale of Land in Minahassa.] (Med. v. w. h. Nederl. Zendeling-Genootschap, XVII and XVIII.)
-
- Bijdragen tot de kennis der Alfouren van het eiland Boeroe. [Alfurus of the Island Bourou.] (Verh. v. h. Batav. Genootsch. van Kunsten en Wetenschappen, XXXVIII.)
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- Iets over naamgeving en eigennamen bij de Alfouren van de Minahasa. [Personal Names among the Alfurs of Minahasa.] (Tijdschr. v. Ned. Taal-Land en Volkenkunde, XXII.)

Het af platten van het voorhoofd bij de Alfouren van de Minahasa.
[Flattening of Forehead among the Alfurs of Minahasa.]
(*Ibid.*, XXI.)

Verkrachting in kinderhuwelijk. [Violation in Child-Marriage.]
(*Tijdschr. voor Strafrecht*, V.)

"The History of Human Marriage." By Edward Westermarck. (Macmillan, 1891.) 8vo., pp. xix, 644. 14s., net.

The author of this work defines marriage as "a more or less durable connection between male and female, lasting beyond the mere act of propagation till after the birth of the offspring." Marriage and family are intimately connected with each other, and it is for the benefit of the young that male and female continue to live together; marriage is, therefore, rooted in family, rather than family in marriage. It is found among many of the lower animals; it occurs, as a rule, among the anthropomorphous apes, and it is universal among mankind. In the opinion of Mr. Westermarck, "there has been no stage of human development when marriage has not existed, and the father has always been, as a rule, the protector of his family. Human marriage appears to be an inheritance from some ape-like progenitor."

On the subject of "communal marriage," Mr. Westermarck sums up the argument as follows:—"Most anthropologists who have written on pre-historic customs believe, indeed, that man lived originally in a state of promiscuity or 'communal marriage'; but we have found that this hypothesis is essentially unscientific. The evidence given for it consists of notices of some savage nations said to live promiscuously, and of some curious customs which are assumed to be survivals from a time when marriage did not exist. Many of the assertions made as to peoples living in promiscuous intercourse have, however, been shown to be erroneous, and the accuracy of the others is, at least, open to question. But even if some of the statements were true, it would be a mistake to infer that these quite exceptional cases represent a stage of development through which all mankind have passed; and it is certainly not among the lowest peoples that sexual relations most nearly approach to promiscuity . . . Equally unwarranted is the inference of a primitive condition of 'communal marriage,' from the fact that in some parts of the world the sexes may cohabit freely before marriage. There are numerous savage and barbarous peoples, among whom sexual intercourse out of wedlock is of rare occurrence, unchastity on the part of the woman being looked upon as a disgrace or a crime. Contact with a 'higher culture' has proved pernicious to the morality of savage peoples; and we have some reason to believe that irregular connections between the sexes have, on the whole, exhibited a tendency to increase along with the progress of civilization. Moreover, free sexual intercourse previous to marriage is quite different from

promiscuity, which involves the suppression of individual inclinations. The most genuine form of it is prostitution, which is rare among peoples living in a state of nature, untouched by foreign influence. Customs which have been interpreted as acts of expiation for individual marriage—a sort of religious prostitution found in the East; the *jus prime noctis* granted to the friends of the bridegroom, or to all the guests at a marriage, or to a particular person, a chief, or a priest; and the custom of lending wives to visitors may be far more satisfactorily explained otherwise. This is true also of the fact that, among certain peoples, courtesans are held in greater estimation than women married to a single husband. Mr. Morgan's view, that the former prevalence of 'marriage in a group' and promiscuity are proved by the 'classificatory system of relationship' in force among many people, pre-supposes that the nomenclature was founded on blood-relationship, as near as the parentage of individuals could be known. But it can scarcely be doubted that the terms for relationships were, originally, mere terms of address, given chiefly with reference to sex and age, as also to the external, or social relationship in which the speaker stood to the person whom he or she addressed. It has been suggested that the system of 'kinship through females only'—implying, chiefly, that children are named after their mothers, not after their fathers, and that property and rank succeed exclusively in the female line—is due to the uncertain paternity which resulted from early promiscuity. But the ties of blood have exercised a far less direct influence on this system than is generally assumed. There may be several reasons for naming children after the mother rather than after the father, apart from any consideration of relationship. The custom in accordance with which, among many peoples, a man, on marrying, goes to live with his wife in the house of her father, deserves special notice in this connection. It is probable that the causes which make children take their mother's name have also directly influenced the rules of succession, but the power of the name itself seems to have been of even higher importance. Moreover, so far as we know, there is no general coincidence of what we consider moral and immoral habits with the prevalence of the male and female line among existing savages; and among various peoples the male line prevails, although paternity is often actually uncertain on account of their polyandrous marriage customs. Avowed recognition of kinship in the female line only by no means implies an unconsciousness of male kinship. Finally there are many rude peoples who exhibit no traces at all of a system of 'kinship through females only.' Thus the facts put forward in support of the hypothesis of promiscuity do not entitle us to assume that promiscuity has ever been the prevailing form of sexual relations, even among a single people, whilst the hypothesis is opposed to all the correct ideas we are able to form with regard to the early state of man. Promiscuous intercourse between the sexes tends to a pathological condition very unfavourable to fecundity; and the

almost universal prevalence of jealousy among peoples unaffected by foreign influence, as well as among the lower mammals, makes it most unlikely that promiscuity ever prevailed at any stage of human development."

Celibacy is almost unknown among savage and barbarous races, and marriage usually takes place at the age of puberty.

Mr. Westermarck agrees with Herr Joest as to the origin of the practices of tattooing, mutilating, and painting the body, and considers that Mr. Frazer's theory that they are fundamentally connected with totemism rests upon very slender foundation. Taking into consideration the fact that in all parts of the world the desire for self-decoration is strongest at the beginning of the age of puberty, it appears much more probable that all these practices originated in a desire to render the person more attractive to the opposite sex. Mr. Westermarck believes that even circumcision owes its origin to the same cause.

"Ideas of modesty are altogether relative and conventional. Peoples who are accustomed to tattoo themselves are ashamed to appear untattooed; peoples whose women are in the habit of covering their faces consider such a covering indispensable for every respectable woman; peoples, who for one reason or another, have come to conceal the navel, the knee, the bosom, or other parts, blush to reveal what is hidden. It is not the feeling of shame that has provoked the covering, but the covering that has provoked the feeling of shame."

Under the head of the "Law of Similarity," Mr. Westermarck criticises the various theories that have been proposed to account for the almost universal horror of incest which distinguishes the races of men; he considers that Mr. McLennan's theory that "exogamy" arose from the practice of female infanticide is erroneous, for "even admitting the prevalence of the custom, and that men may have endeavoured to make up the deficiency of women by capturing wives from foreign tribes, it is hard to see why intercourse with women of their own tribe should on this account have been prohibited, sometimes even on pain of death." Mr. Spencer's hypothesis that the man who possessed a captured wife was held in greater esteem than one who had married a native woman, cannot explain the origin of prohibitions of marriage between the nearest kin, "for it is impossible to suppose that that powerful feeling which restrains parents from marrying their children, brothers from marrying their sisters, can have been due to man's vain desire to have a trophy in his wife." No more satisfactory is Dr. Tylor's suggestion that exogamy was "an early method of political self-preservation," for the prohibitions of close intermarriage certainly cannot be explained on this ground. The idea of Mr. Morgan and others that prohibitions of the marriage of near kin have arisen from observation of the injurious results of such unions "is insufficient to account for that *instinct*, which, under normal circumstances, makes sexual love between the nearest kin a psychical impossibility."

"It has been asserted that, if there be really an innate horror of incest, it ought to show itself intuitively when persons are ignorant of any relationship. But ancient writers state that, in Rome, incestuous unions often resulted from the exposure of infants who were reared by slave-dealers. . . . In the early romances incestuous love is by no means an uncommon theme, and the folklore of various peoples gives many instances. . . . Man has thus no horror of marriage with even the nearest kindred if he is unaware of their consanguinity; consequently, Mr. Huth concludes, there is no innate feeling against incest. Of course I agree with Mr. Huth in thinking that there is no innate aversion to marriage between *near relations*. What I maintain is, that there is an innate aversion to sexual intercourse between persons living very closely together from early youth, and that, as such persons are in most cases related, this feeling displays itself chiefly as a horror of intercourse between near kin." Mr. Westermarck believes that this may be accounted for by the fact that consanguineous marriages being injurious, experience would lead in course of time to the development of an instinct against them; "it would display itself simply as an aversion on the part of individuals to union with others with whom they have lived, but as these are for the most part blood-relations, the result is the survival of the fittest."

Mr. Westermarck considers that when this horror of incest was fully developed, the difficulty of procuring a wife in a friendly manner must have led to marriage by capture, which in its turn gave place to marriage by purchase, symbols of which may still be traced in the marriage portion and the wedding gifts.

Monogamy was probably the earliest form of human marriage, both polygyny and polyandry requiring a certain amount of civilization.

"As a general rule, human marriage is not necessarily contracted for life, and among most uncivilized and many advanced peoples, a man may divorce his wife whenever he likes. . . . Marriage, generally speaking, has become more durable in proportion as the human race has advanced. . . . The history of human marriage is the history of a relation in which women have been gradually triumphing over the passions, the prejudices, and the selfish interests of men."

Whatever opinion may be formed as to the validity of Mr. Westermarck's conclusions, and on several points he is at issue with almost all anthropologists who have discussed the question, it cannot be denied that he has brought together a valuable collection of facts in support of his arguments, and has earned the gratitude of students by so doing; moreover, at the end of the book is a list of "authorities quoted" which almost amounts to a bibliography of the whole subject.—[G. W. B.]

"Charles Darwin: His Life and Work." By C. F. Holder. (Putnam, New York, 1891.) 8vo., pp. 279. The author, in his

preface, states: "In the preparation of the work I have not attempted an analytical dissertation upon Darwin's life-work, neither have I discussed his theories or their possible effect upon the scientific world, but I have simply presented the story of his life, that of one of the greatest naturalists of the age; a life of singular purity; the life of a man who, in loftiness of purpose and the accomplishment of grand results, was the centre of observation in his time; revered and honoured, yet maligned and attacked as few have been. . . . In the preparation of this volume I am indebted to Francis Darwin, Esq., whose life of his father is the only work extant giving fully the life and letters of the naturalist."

"Modern Cremation: Its History and Practice." By Sir Henry Thompson, F.R.C.S., &c. Second Edition. (Kegan Paul, London, 1891.) Pp. 163. The work is divided into the following sections; Historical Sketch of Modern Cremation in England. A paper on Cremation, published by the author in the "Contemporary Review," 1874; followed in two months by a second paper, entitled "A reply to Critics, and an exposition of the process," in the same Review. The argument for Cremation is based on a large experience gained between 1874 and the present date. Official instructions issued by the Cremation Society of England. Method of procedure in investigating the cause of death in France.

"Dissolution and Evolution, and the Science of Medicine." By C. Pittfield Mitchell. (Williams and Norgate, 1891.) Pp. 246. On page 221 the author summarises his arguments as follows: "We have been brought to recognise that the multifarious phenomena of disease are originally and innately identical. Neglecting a few aberrant and equivocal examples, true disease is that which dissolution verbally symbolises—a disintegration of matter caused by absorption of surrounding energy. But in the body as out of it simultaneous and successive with dissolution is the distinct and contrary process of evolution. Together these two processes comprehend not only the changes that are essential to disease, but also its non-essential though inseparable concomitants."

"Contemporary Socialism." By John Rae. (Swan Sonnenschein, 1891.) Pp. 505. This work deals with the history of Socialism under the following heads; the progress and present position of Socialism, Ferdinand Lassalle, Karl Marx, the federalism of Carl Marlo, the Socialists of the Chair, the Christian Socialists, Anarchism, Russian Nihilism, Socialism and the Social question, State Socialism, and the Agrarian Socialism of Henry George.

"Actes du deuxième congrès international d'anthropologie criminelle biologie et sociologie." (Paris, G. Masson, 120, Boulevard St. Germain, August, 1889.) Pp. 540. The volume contains a full report of the proceedings of the Congress.

"British New Guinea."

The following notes from the Annual Report for 1890 are a continuation of those published in the last number of the *Journal*. (Page 75.) As a body of men, the Tugere are as fine as any tribe met with in New Guinea. In one tribe on the Upper Fly River, there are men as muscular and equally capable in appearance, but those of the Tugere met with are probably the best men of the tribe. Many of them are of a light brown colour. They are armed exclusively with bows and arrows. They propelled their canoes (clumsy in build, 35 to 40 feet long, and without outriggers) by means of poles made of the mid-rib of the sago palm-leaf. We saw no paddles in use. They wear the hair, which is frizzled, plaited into a great number of small cords with a kind of sedge; each cord falls down on the neck, and at the lower extremity the sedge is wound round to form at the end of each plait a little ball of about the size of a loquat, so that, at a few yards distance, each man looks as if he carried on the sides and back of the neck a bunch of grapes, so large and heavy that it is difficult to turn the head. The forehead is high and well formed, the eyes of a hazel colour. In the ears are large rings of the wire feathers from the wing of the cassowary. The *alæ nasi* are profusely ornamented. A hole is made in each from above downwards into the nostril, and into these holes are put bamboos, bone, &c., the lower end coming out of the nostril, so that the bamboo, &c., is thus fixed in a perpendicular position. One man wore in this way in his nose two leg-bones of a pig, each one fully three-fourths of an inch in diameter and about seven inches long; the upper ends reached nearly to the bridge of the nose, and the lower parts lay in front of the mouth, and the ends were below the level of the chin. Some wore bamboos of similar proportions, others bamboos an inch in diameter in each side, and about two inches long. Some, again, had cassowary claws stuck into these holes with the points directed towards the eye. In many, between the holes for the reception of this nasal jewellery, there are on each side of the ridge of the nose a perpendicular slit about half an inch long. Many wore braids. Round the neck were suspended sometimes half a dozen pigtails, certain parts of men (probably those killed by the wearer), dried and tanned, or perhaps several strings of dog's or wallaby's teeth. On the breast were cross-belts of fibre, or Job's tears, and round the waist are generally two girdles, one fastened with a shell as a sort of button. Some wore a pubic shell, but most had no such covering. On the legs and arms were rings of plaited cane or mat-work. They do not tattoo. A considerable number suffered from *tinea desquamans*. A few of them had a small cocoanut suspended round the neck with a hole at one end and three holes at the side; this they use as a sort of whistle call. They use small baskets made of mat-work to carry small articles in, but do not seem to employ for this purpose the net bag so common in most parts of the possession. They salute by touching

the navel. In the bow gauntlet there were large plumes of cassowary feathers. They use as food, when travelling on these excursions, arrowroot made up in masses of four or five pounds, round which a little basket is made of cocoanut leaf, with a small strap for transport. They had also a few cocoanuts, which they may, however, have picked up coming along the coast.

(Page 80). The people (of the St. Joseph district), are of great interest on account of their large numbers, their political relationships, and their peculiar stage of civilization. There are probably 10,000 people within the area. They say that originally villages were named after the founder, and they have legends as to who were the founders of several. But one peculiarity of the place is that there are often several villages of the same name; thus there are at least two Aipianas, two Amoamos, three Rarias, two Inawabuis, and so on. In each village there are several chiefs, each of whom is the head of his own family, and often of a number of other families connected by intermarriage or by blood. Sometimes they recognise one man as a representative chief of the whole village, but in other cases there is no principal chief. The great matter between the different tribes is the Blood Account. Inawabui, for example, some years ago killed seven men of Inawaia. Recently, Inawaia has nearly balanced matters by killing six men of Inawabui, but a small surplus still remains in favour of Inawabui. In attempting to wipe that out, Inawaia, which for the time being is in the ascendant, will probably create a balance in its own favour, and then Inawabui would, in the ordinary course of events, watch its opportunity to wipe out the debt, and probably put something to its credit. Rarai, in its days of prosperity, ran up a score against Amoamo of some seventeen deaths. Now Amoamo has cleared the account and got eight ahead of Rarai in the process. It is merely an account of blood between these St. Joseph tribes; their state of civilization is such that one does not hear a word of such a thing as eating the slain, nor does one see skull trophies in the houses. They use as arms the spear, and shield, and stone club, but the bow and arrow they do not altogether neglect. They do not fortify their villages, but they build watch houses on the tops of high trees, and feed the sentinels by sending their food up to them in a basket attached to a long cord. All the tribes seem to intermarry. There are regular market places where they meet at stated times to barter, but this is not universal among them. The people of those tribes that are on friendly terms visit each other frequently, and there are houses for the reception of strangers.

The domestic arrangements and habits of the people are of still greater interest than their intertribal relations. Each family has its recognised head, and each its own dwelling. The young men who have reached puberty and are not married, are supposed to occupy common quarters, under the general control of some man advanced in years; with this exception, the people live in families. During the night there is much noise in the village after all have

retired to rest; husbands and wives squabble, wives beat the children, and the children are great screamers. In the morning the women sweep out the house and clean the ground about it from the traces of pigs, and sweep it clean. Then they cook the breakfast, boiling in narrow-mouthed clay pots the taro or bananas for the morning meal. When cooked, this is removed into a wide-mouthed clay dish, and cocoanuts rasped on to the top of the food. Meanwhile, the man or men of the family have most likely gone to the strangers' or club house, where they sit on the veranda talking, smoking if they can. The dish is carried there by the wife, and laid down near the husband. He takes from the little net bag he carries on his arm either a spoon made from the shell of a cocoanut, or a fork of from two to five prongs, made of the leg-bone of a cassowary, with which he deliberately eats, usually inviting some friend or gossip to partake. After some time the wife returns for the empty dish. Meantime, the wife and children have had their breakfast on their own veranda. The refuse is given to the pig, the dog is fed, the dishes are washed and laid past, and they are ready for the duties of the day. Normally this is that husband and wife, and such children as are able, get ready for work in the garden. The man starts with a spear or club, and the wife follows with two or three net bags hanging down her back from the top of her head to bring home food or firewood in. About 3 p.m. they begin to return, the man bearing his weapons, the woman carrying food and firewood for the next twenty-four hours, with probably the baby perched on the top of the burden. The net bag has a loop which comes across the top of the head, and as they begin to carry in this way when they are children, and the skull bones are soft, a hollow is produced in the calvarium in which this loop rests. Immediately after returning from the garden, the man goes to his club, the woman lights the fire and cooks the evening meal, which is of the same materials and is disposed of in the same way as the morning meal. After supper, if there has been no death in the village within a month, they dance on the village square. Should the garden work not require attention, the day may be spent in different kinds of employment. It is remarkable that as far as Mou, where they use the Roro-Maiva dialect, the women wear petticoats down to the knees, similar to those at Port Moresby and along the coast; but from Inawaia and Inawai inland, they wear short petticoats from six to nine inches long. The women, of course, make these themselves, and much time and criticism is given to cut a petticoat the proper length, and to give it a good shape and form. They make native cloth also, pieces of which the men are fond of wearing in wet or cold weather. This is generally made from the bark of the bread-fruit tree, but they also use for this purpose the bark of two other trees. Men and boys wear a band about three inches wide, made of the same materials. The women have the septum of the nose and the lobes of the ear pierced, but, as a rule, have neither nose nor ear ornaments, but have occasionally an armlet of shell or piece

of pearl shell hung round the neck. He is, however, a poor man on the St. Joseph who has not some armshells for himself. Many wear half a score. The men are fond of painting the face in different coloured stripes, and of wearing long hair. The hair of the women is short, but the face of the man is kept entirely free from hair, except his eyelashes. All is removed by catching each hair between two vegetable threads fixed by one end in a short piece of twine, which gives a twisting motion to the threads, which pulls the hair out by the roots. A few, very few, men wear beards. Many young men and youths figure as great dandies. The dandy will have a white feather on the top of his head, a ruff of feathers round his hair, then a ruff of bamboo fibre, a piece of flat white shell ornamented with turtle shell on his forehead, through his nose a long piece of white polished clam shell, paint on his face, but not a trace of hair, earrings of masses of turtle shell, coils of shell beads on his neck, pearl shell on his chest, and perhaps half a score of shell rings on his arms, with red clay daubed over various parts of his body, and some long streamers from his girdle and elbows, with ruffs of dressed banana fibre on his legs and ankles, and bands of painted pandanus leaf just below the knee.

But the real distinguishing mark is the girdle. This goes round the body just over the navel, but is put on so tightly that often the liver and stomach hang over the top of the girdle, and the unfortunate man of fashion walks as if he were being lifted off the ground by the upper distended half of his body. A great many of these young men have very puny muscles below the belt, and it is almost impossible to avoid thinking that this band must constrict the aorta, and thus starve the body below the ligature. The women do not make pottery. What they have, and all appear to have as much as they require, comes from Roro or Port Moresby. The men seem to make the nets used for bags and also for hammocks; all the men seem to sleep in hammocks, except in villages, where they have to occupy the mosquito bag. All are great consumers of betel nut and lime, which they eat all day long, the betel palm flourishing there in great luxuriance. The baby may be said, for some time, to practically live in a net; it is carried in one suspended to the mother's neck, dangling low down in front of the woman; it sleeps in a net bag, and when it awakes and cries, and cannot change its position in the bag, which is probably suspended from the roof of the veranda, it presents a most comical appearance. They bury in the common street, and keep the graves covered by fences for a little time. In all the villages there are at present, great strings, sometimes containing thousands of sprouting cocoanuts, to be used when great feasts are given. In nearly all the villages there is a pulpit-like erection in the square made of cocoanut leaves, with long bamboos projecting from it with streamers of painted native cloth; this is a tabu that no one is to touch these cocoanuts. A tabu is put on the trees at Aipiana by a procession of four men in masks going along the public square in the morning. They had the head and body completely enveloped

in a garment of native painted cloth, shaped like a lady's well fitting jacket, with short flaps, but with something added to each side which projects like a wing, and in which I presume were the arms; the skirt was made of banana leaves, the upper end fastened to a girdle; the outline at a little distance was exactly that of a woman in a skirt and jacket. At Maiva this tabu was declared by a man eliciting tremendous shrieks from a syren just outside the village. These people struck me as being very intelligent, and taking them all round as being very healthy. A few cases of elephantiasis with very little deformity were seen. At Rarai there was noticed what medical men would call a model case of the tubercular form of leprosy in a boy about fourteen. Probably half a score of cases of the non-tubercular kind were noted. Most fortunately *Tinea desquamans* has not reached this district as yet, but of course yaws are universal among the young children. Swollen glands in the groin are rather common. We had some cases of fever but none severe.

A DESPATCH from the Administrator of New Guinea, dated 27th April, 1891, contains the following:—"In dress, manners, and customs, Masingara closely resembles the coast tribes; but they have one custom which I have not previously assisted at in New Guinea. Soon after the appearance of Gume, he presented me in person with three or four plants of a small species of *Piper methysticum*. Not knowing that they attached any particular meaning to this, I gave the plants to the two Fijians of the party, to whom I knew it would be a great treat. A few minutes afterwards a man came and told me that it was the custom of this tribe to drink the *Piper methysticum* when they had any important business or undertaking to discuss. Some more was accordingly brought for myself and for the coast chiefs, and they began at once to use it in their own way. This variety of the plant was about two feet high, all of a green colour, the stem much knotted, and the root consisting of a large number of small fibrils. The man chewed the root fibrils and the stem; any man of an obliging disposition did this, but as a matter of politeness it was generally done by a Masingara man. The chewed mass he put into a part of the cloth-like portion of the sheath of the young leaf of a cocoanut tree, a little water was added, and it was then squeezed into a small dish consisting of one half of a cocoanut shell. One man drank this off without any ceremony or remark; then a mass was chewed for someone else, and the same process was gone over as long as the plants lasted, or anyone cared to prepare or drink it. The two Fijians of the party pronounced the plant to be 'very strong,' but they were much amused by the extremely primitive and unceremonious way in which it was drunk. The difference between this inornate custom in the Masingara tribe, and the ^{elaborate} and imposing, sometimes almost solemn, corresponding ceremony in the Pacific Islands, represents, not unfairly, the immense distance ^{en} ^{mon} ^{or} ^{ear} ^o ^{hat} ^{separates} the Papuan from the Polynesian civilization."

"Crozet's Voyage to Tasmania, New Zealand, the Ladrone Islands, and the Phillipines, in the years 1771 1772." Translated by H. Ling Roth. (Truslove and Shirley, London, 1891.) 8vo., pp. xxiii, 148. (Plates.)

In this translation of what is commonly known as "Crozet's Voyage," Mr. Ling Roth has unearthed and made accessible to the doryan reader an interesting account of the adventures of a party of Frenchmen who went, under the command of Marion de Fresne, in search of the great land which was supposed to be situated somewhere in the Southern Ocean. Crozet was Marion's lieutenant, and took command of the expedition after the murder of his chief by the New Zealanders.

To anthropologists the work is of interest as giving a brief, but vivid account of the natives of New Zealand as they were before they had been brought into close contact with the Europeans. The following extracts will serve to show that the author was not a bad observer:—"I remarked with great astonishment that amongst the native savages who boarded the vessels in the early days there were three kinds of men, of which those who appeared to be the true aborigines were yellowish-white and the biggest of them all, their mean height, 5 feet 9 to 10 inches, and their hair black, glossy and straight; others were more swarthy, and not quite so tall, their hair slightly frizzled (? curled); finally there were true negroes with woolly heads, not so tall as the others, but generally broader in the chest. The former have very little beard, and the negroes have very much. . . . Generally speaking, these three kinds of men are handsome and well formed, with good heads, large eyes, well-proportioned aquiline noses, and well-proportioned mouths, beautiful and very white teeth, muscular bodies, vigorous arms, strong hands, broad chests, extremely loud voices, small stomach, almost hairless, well-proportioned, but slightly gross legs, broad feet, and the toes well spread out. The women are not so good-looking on close examination; they have generally a bad figure, are short, very thick in the waist, with voluminous mammae, coarse thighs and legs, and are of a very amorous temperament; while on the contrary the men are very indifferent in this respect." Elsewhere Captain Crozet remarks: "It is, no doubt, surprising that we should have found at this corner of the earth, in islands unknown until the present day, and cut off from all communication with other parts of the globe, three varieties of man: whites, blacks, and yellows. It is almost certain that the whites are the aborigines. Their colour is, generally speaking, like that of the people of Southern Europe; and I saw several who had red hair. Amongst them were some who were as white as our sailors; and we often saw on our ships a tall young man, 5 feet 11 inches high, who, by his colour and features, might easily have passed for an European. I saw a girl, fifteen or sixteen years of age, as white as our French women."

The book is well illustrated, and contains figures of several weapons and implements which are not commonly found in

museums. One of the most interesting is, perhaps, that of a beautifully carved funnel, used to feed a Maori Chief when his face is being tattooed, for at that time, owing to the inflammation set up by the operation, he has to be fed on liquid food, being unable to move his jaws.

An appendix by Mr. J. R. Boose, the Librarian of the Royal Colonial Institute, contains a brief summary of the principal works that should be studied by the student of New Zealand affairs.—[G. W. B.]

"The Melanesians, Studies in their Anthropology and Folk-Lore." R. H. CODRINGTON, D.D. (Oxford, Clarendon Press, 1891. 8vo., pp. 419, Map and 33 Illustrations. Price, 16s.)

In his extremely valuable book, "The Melanesians," Dr. Codrington has brought together the result of twenty-four years' work in the West Pacific. Although the title is comprehensive, the observations here recorded are limited to that portion of Melanesia embracing the more southerly of the Solomon Islands to the northern New Hebrides. Melanesia is the meeting ground, as the author points out, of two currents of influence, one from the Polynesian Islands of the East Pacific, the other from the Asiatic Islands of the Malay Archipelago. Upon these currents float respectively the kava-root and the betel-nut. This mixture of races is apparent in the region studied by Dr. Codrington, but it is evident that the book deals almost entirely with customs which are truly Melanesian. The author appears to have overlooked the fact that the kava has crossed the track of the betel-nut as an outlier is found in the Fly River district of New Guinea. The occurrence of the loom in Santa Cruz only "may connect the people of that group with those of the Caroline Islands"; but our author makes no attempt to deal with the Ethnology of Melanesia.

The people are divided into two or more exogamous classes (clans), in which descent is counted through the mother. There are no tribes, no clan property in land, no hereditary chiefs. An exception to what elsewhere obtains is found in Ulawa, Ugi, parts of San Cristoval, Malanta, and Guadalcanar in the Solomon Group. A district in which the languages, decorative art, and appearance of the people differ from those of their neighbours; here there are no clans, and descent follows the father. In the Torres Islands and Northern New Hebrides there are only two clans which have neither name nor emblem; but names are given where there are more than two clans. Totems in the usual acceptance of the term are absent. The wife does not go over to her husband's "side of the house," nor he to hers; the children belong to the mother's side. A man's nearest relations are his sister's children; his sons are not of his own kin, though he acts a father's part to them. A youth looks to his mother's brother, not to his father, for social advancement. There are no traces of a communal system of marriage. Although close relations belonging to different clans may lawfully marry, public opinion discountenances such unions.

The names for relationships, pedigrees, and the various kinds of reserve between those who have become connected by marriage are carefully recorded.

Except at Saa, in Malanta, there is no native history or tradition. The remarks on the acquisition of power by chiefs are very suggestive. Land is divided into (1) Town lots; (2) Garden ground; (3) Bush; the latter is not property. Every part of land property has its owner for the time, who possesses it as his share of the family property, but who can by no means alienate it as if it were simply his own. A man can have property in trees which are not on his own ground. Ancient hereditary cultivated land passes at death to the nephews on the mother's side, each taking a piece and all having collectively a property in the whole; but land reclaimed by the deceased or his recent predecessors is divided among his children, who do not hold it in common. There is thus a gradual tendency towards patriarchal succession. Personal property goes to the children generally; but the right of the sister's children is still maintained.

Much light is thrown by Dr. Codrington on the Secret Societies which are so common in Melanesia. As in the initiation ceremonies of Australia and elsewhere no woman and no uninitiated man may be present at the ceremonies, but there is the important point of difference that there is no limit of age as regards admission. No one who is not a member of at least one Society can take any social position. No secret article of belief is made known, or form of worship practised; all the knowledge imparted is how strange noises are produced, how dresses and masks are made, and in some cases a song and a dance. In the Banks Islands these Societies are known as "Tamate" or Ghosts. In the Torres Islands there are a hundred of them, and every man belongs to four or five, each having a leaf or flower as its particular badge; but there is usually one Great Tamate. The number of days of seclusion and of attendance, and the amount of the admission fees vary with the dignity of the Society. Analogous to the Tamate Societies of the Banks Islands is the Qat of the New Hebrides, but this has no permanent place of resort, and its most important characteristic is the dance. Something similar to this occurs in the Solomons. The downfall of the mystery of these Societies is now complete, and bull-roarers have become the playthings of boys.

Very characteristic of Melanesian villages is the Club house. The Club is not connected with the secret societies of the "ghosts," nor is it a secret society itself; it is social and not at all religious in character. There are many stages of rank, all of which have to be purchased. In the Banks Islands there are eighteen steps and ovens, the latter term having reference to the initiatory feasts. The degrees have their particular emblems and often special costumes; the highest stages are very rarely reached. Dr. Codrington does not connect these societies with institutions of other backward races. The Club may very well be locally developed from the social life of the Melanesians, but one may fairly regard

the Secret Societies as the vanishing remnants of an ancient custom of initiation into manhood. Possibly the decadence of the latter was due to more social habits and the development of Club life. As the initiation ceremonies, for some reason or another, were accounted less sacred, the entrance age could be lowered to give initiates an earlier start in life. Innovations did not stop there, enterprising individuals set up private ceremonies in addition to the original mystery, and the progress of disintegration continued until the parent ceremony disappeared. This appears to have been the history of these Melanesian Societies, possibly the weakening of ancient customs may be partly due to the mixture of races which occurs in this district.

All Melanesian religion consists in getting *Mana* for oneself or getting it used for one's benefit. *Mana* is supernatural power or influence. Anything which strikes a man's fancy may have *Mana* in it; then he tests it, and if he is lucky or has good crops he is right in his conjecture. Certain forms of words may have *Mana*. This power, which may be transferred, though itself impersonal, is always connected with some person who directs it; all spirits have it, ghosts generally, and some men. If a stone is found to have a supernatural power it is because a spirit has associated itself with it, the ghost of a dead man is with his bones. All social standing, power, success, and wealth is due solely to *Mana*.

Two supernatural beings are recognised ghosts or spirits of dead men and spirits which never have been men. Prayers and offerings may be made to both, but the notion of propitiation is not at all commonly present. There is no priestly order. The simplest sacrificial act is to throw a small portion of food to the dead; this is common throughout Melanesia; only in the Solomon Group has this domestic rite developed into any formal sacrifice. In the Solomons, offerings are made to ghosts and consumed by fire as well as eaten, only food is offered. In the Banks Islands and Northern New Hebrides the offerings are made to spirits, who are almost always connected with stones on which the offerings are made, but there is no sacrificial fire or meal; money is often offered. Dr. Codrington makes some noteworthy remarks on carved images and on sacred places, and sacred stones and other objects. All magical operations are caused by *Mana*, by means of this men are able to control the forces of nature, to cause sickness and remove it, to know what is far off in time and space, to bring good or bad luck. No man has this power of his own, it is done by the aid of ghosts or spirits. Numerous forms of magic and ghostly intercourse are described.

The author gives a sketch of the incidents which occur in the lives of the people. A proper *couvade* is found in San Cristoval alone, and here the child follows his father's kindred, but there is much elsewhere which approaches this. Infant betrothal is common. The levirate obtains as a matter of course. Polygamy is the rule, polyandry is unknown. The burial customs and the Melanesian belief in the soul are very carefully described.

Dr. Codrington gives two chapters to the arts and amusements of life, in which he describes the canoes, houses, weapons, implements, fishing apparatus, cookery, clothes, the various kinds of money, and money lending, the decorative arts, dances, song, musical instruments, toys, and the bull-roarer. There are many valuable facts on the geographical distribution of various kinds of implements and of ornament. The poisoned arrow question is fully discussed, and the author clearly shows that though the arrows are tipped with splinters of human bone and anointed with irritant juices of plants, yet to the native mind it is the Mana with which the arrows are charged, and not the bone or the anointing of the arrows which causes their deadly effect.

There is a chapter on cannibalism, head-taking, slaves, the heavenly bodies, seasons, narcotics and other miscellaneous information. The last chapter is devoted to the narration of seventeen native stories.

The foregoing abstract will give the reader some idea as to the ground covered by Dr. Codrington, but only a careful perusal of the book will give an adequate conception of the thoroughness with which the subject is treated. For the first time has the Melanesian soul been bared to European gaze, and much that was unintelligible or fragmentary in the accounts of previous travellers in Melanesia can now be better understood or satisfactorily explained. In revealing the Melanesian to us Dr. Codrington has revealed himself as a learned, painstaking and sympathetic student of human nature.—[A. C. H.]

"Hereditary Short-sight." As the result of exhaustive researches, Dr. Motais, of Angers, finds that a short-sighted mother has a tendency to transmit the defect to her sons; while a father's short-sightedness would descend to his daughters. The direction of astigmatism varies with different races; and this is especially marked between Europeans and Jews, for whereas Europeans who suffer from this infirmity can, as a rule, distinguish vertical lines better than horizontal ones, astigmatic Jews see the horizontal lines best.

"Journal of the Asiatic Society of Bengal," vol. lix, part 1, Nos. 3 and 4, contains an article on Chattisgar; notes on its tribes, sects and castes, by P. N. Bose, of the Geological Survey of India.

"Proceedings of the Asiatic Society of Bengal," No. 4, remarks on a birch-bark MS. found in Kashgaria (plate).

"The American Antiquarian," vol. xiii, No. 4. Defensive works of the mound builders, by S. D. Peet. The paper, which is fully illustrated, describes the different modes of defence thus:—
(1) The signal station; (2) The stockade fort; (3) The hill fort; (4) The stone fort; (5) The village fort.

"Proceedings of the Royal Society of Edinburgh," vol. xvii. "On evolution and man's place in Nature," by Professor Calderwood.

"The Journal of the Royal Society of New South Wales," vol. xxiv, part 2, contains "A collection of Folk-songs and Myths from Samoa," by the Rev. T. Powell and the Rev. T. Pratt; also "Some remarks on the Australian Languages," by Dr. John Fraser.

"The Transactions of the Canadian Institute," vol. i, part 2. "The Déné languages," considered in themselves and incidentally in their relations to non-American idioms, by the Rev. Father A. G. Morice, O.M.I. The author states that he uses the term Déné to mean the large family of Indians more commonly known under the inappropriate names of Tinné, Tinneh, or Athabascan. It extends west of the Rockies from the 51st degree north latitude, and east of that range of mountains from the southern branch of the Saskatchewan to the territory of the Esquimaux. Apart from the Nabajoes of New Mexico, who are ethnologically connected therewith, it is divided into a dozen or more tribes speaking as many dialects.

"Proceedings of the Royal Geographical Society," July, 1891. The Annual Address on the Progress of Geography. The Indian Surveys. Our present knowledge of the Himalayas, by Colonel Tanner. Mr. A. Sharpe's journey from Karonga (Nyassa) to Katanga (Msidi's country) *viâ* the northern shore of Lake Mweru.

August, 1891. Exploration of the Benue and its northern tributary, the Kebbi, by Major Claude Macdonald. The volcanic lake of Tritriva, Central Madagascar, by the Rev. James Sibree, junior.

September, 1891. Ptolemy's topography of Eastern Equatorial Africa, by Henry Schlichter. The Selkirk Range, North-West America, by Harold W. Topham.

"Archæological and Ethnological Papers of the Peabody Museum." Vol. i, No. 2, contains a monograph on the Karankawa Indians, the coast people of Texas, by Albert S. Gatschet and others.

"Proceedings of the Royal Society of Antiquaries of Ireland." Vol. i, No. 5. A contribution to Irish Anthropology by W. Frazer. Gives an account of the measurements of a considerable number of skulls obtained from a mound at Donnybrook. Vol. i, No. 6, has a paper entitled "Fresh facts on Prehistoric Pottery," by Rev. G. R. Buick (four plates).

"Internationales Archiv für Ethnographie, Schmeltz." Vol. iv, part 4. The Tugeri head hunters of New Guinea, by Professor A. C. Haddon (plate), and other papers.

"Archiv für Anthropologie," vol. xx, parts 1, 2. The early iron age in Norway, by Dr. Undset. On the growth of dwarfs, by A. Schmidt (11 plates). The heathen cross and its affinities between the Oder and the Elbe.

"Die Urgeschichte des Menschen," parts 1-12, pp. 384 (to be completed in ten chapters), by Dr. M. Hoernes, published by Hartleben, Vienna (the above numbers containing the first five and part of the sixth). The work, when completed, will trace the history of mankind from the earliest to the present times.

"Revue Mensuelle de L'Ecole d'Anthropologie." No. 7 contains an account of an expedition undertaken by the School of Anthropology into Belgium. The paper is well illustrated. No. 8 contains a paper (illustrated) on throwing sticks.

"L'Anthropologie," vol. ii, No. 4, contains the continuation of the paper by T. Volkov on marriage customs in the Ukraine. Also a description of the prehistoric wells for the extraction of flints at Champignolles (Oise), by G. Fonju (5 plates).

"U.S. Bureau of Ethnology." At the recent meeting of the British Association at Cardiff, Professor Max Müller, who presided over the Anthropological Section, made the following remarks on the work of the United States Bureau of Ethnology and its Director, Major J. W. Powell:—"After having expressed in the name of our Committee our high appreciation of the excellent Report presented to our meeting on the Tribes inhabiting North Western Canada, and a strong hope that the British Association will see fit to continue the grant of £100 to enable the Committee to continue and finish its important work, I have great pleasure to inform this Meeting that I have just received the proof sheets of another most important publication on the Classification of the Indian Languages spoken in America. It is a splendid piece of workmanship from Major Powell, the indefatigable Director of the American Bureau of Ethnology. The publications of that Bureau count among the most valuable contributions to Anthropological science, and they reflect the highest credit not only on Major Powell and his fellow workers, but also on the American Government, which has sanctioned a very large outlay for the prosecution of these studies. There is no stint in the way in which these volumes are brought out, and most of the papers contained in them inspire the student with that confidence which can only be produced by honest, conscientious, and truly scholar-like work. Our American friends have perceived that it is a national duty to preserve as much as can still be preserved of the languages and thoughts of the indigenous races who were the earliest dwellers on American soil. They know that the study of what I may venture to call intellectual geology is quite as important as that of terrestrial geology, and that the study of the lower strata contains the key to a right understanding of the higher strata in the growth of the human mind. Coming generations will call us to account for having allowed the old world to vanish without trying to preserve its records. People who ask what can be the use of preserving the grammar of the Mohawks, forget what we should give if some scholar at the time of Cato or Cæsar had written down what many

could then have done, a grammar of the Etruscan language. Some years ago I had succeeded in persuading a Secretary of State for the Colonies that it was the duty of the English Government to publish a series of Colonial Records, containing trustworthy information on the languages, customs, laws, religions and monuments of the races inhabiting the English Colonies. Lord Granville saw that such an undertaking was a national duty, and that the necessary funds should be contributed by the various Colonies. Think what a magnificent work this would have been. But while the American Government has pushed forward its work, Lord Granville's scheme expired in the pigeon holes of the Colonial Office. America may well be proud of Major Powell, who would not allow the treasures collected by various scholars and Government officials to moulder and perish. He is the true enthusiast, not a man of mere impulse and good intentions, but a man of sustained effort in his work.

"He deserves the hearty thanks of our Association, which I feel proud to be allowed to tender to him in the name of our Anthropological Section."

THE JOURNAL
OF THE
ANTHROPOLOGICAL INSTITUTE
OF
GREAT BRITAIN AND IRELAND.

JUNE 9TH, 1891.

EDWARD B. TYLOR, Esq., D.C.L., F.R.S., *President, in the Chair.*

The Minutes of the last meeting were read and signed.

The following presents were announced, and thanks voted to the respective donors:—

FOR THE LIBRARY.

- From the AUTHOR.—Antiquités céramiques trouvées dans le Nicaragua en 1882-1883. Par Carl Bovallius. 76 Illustrations.
- Nicaraguan Antiquities. By Carl Bovallius. 4to. Stockholm, 1886. Plates and maps.
 - Alcohol a factor in human progress. By William Sharpe, M.D. 2nd Edition. London, 1882.
 - The Cause of Colour among Races and the Evolution of Physical Beauty. By William Sharpe, M.D. New Edition. 8vo. New York, 1881.
 - Humanity and the Serpent of Genesis. By William Sharpe, M.D. 8vo. Boston, U.S.A., 1886.
 - L'Anthropologie au Conseil de Revision. Par le Dr. R. Collignon. 8vo. Paris, 1891.
 - L'Indice Céphalique des populations Françaises. Par le Dr. R. Collignon. 8vo. Paris, 1890.

- From the AUTHOR.—Greeting by Gesture. By Garrick Mallery. 8vo. New York, 1891.
- On the Age, Formation, and Drift-stages of the Darent Valley. By Joseph Prestwich, D.C.L., F.R.S., F.G.S., &c. Plates and Woodcuts.
- The New School of Criminal Anthropology. By Robert Fletcher, M.D. 8vo. Washington, 1891.
- Time-reckoning for the Twentieth Century. By Sanford Fleming, C.M.G., LL.D., C.E., &c. 8vo. Washington, 1889.
- Anthropological Studies. By A. W. Buckland. 8vo. London, 1891.
- From the PUBLISHERS.—(Chapman and Hall.) The History of Modern Civilization. 8vo. London, 1891.
- From the SECRETARY OF STATE FOR THE COLONIES.—The Nada Language.
- From the VEGETARIAN SOCIETY.—Foods for Man; Animal and Vegetable. A Comparison. By Benjamin Ward Richardson, M.D., F.R.S., &c. Manchester, 1891.
- From the ÉCOLE D'ANTHROPOLOGIE (Paris).—Revue mensuelle, 1891, Nos. 4, 5.
- From the GOVERNMENT OF PERAK.—The Perak Government Gazette. Vol. iv. Nos. 9–11.
- From the ACADÉMIE DES SCIENCES DE CRACOVIE.—Bulletin International. 1891. Nr. 1–4.
- From the BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—Report. 1890.
- From the GEOLOGISTS' ASSOCIATION. Proceedings. Vol. xi. No. 9.
- From the ESSEX FIELD CLUB.—The Essex Naturalist. Vol. v. Nos. 1–5.
- From the EDITOR.—Die Urgeschichte des Menschen. Parts 1–5.
- Internationales Archiv für Ethnographie. Band iv. Heft 3.
- L'Anomalo. Anno iii. N. 4.
- Nature. Nos. 1124–1127.
- Revue Scientifique. Tome xlvii. Nos. 20–23.
- Science. Nos. 430–433.
- From the CANADIAN INSTITUTE.—Transactions. Vol. i. Part 2; Annual Report for 1890–91.
- From the ROYAL UNITED SERVICE INSTITUTION.—Journal. No. 160.
- From the AUSTRALIAN MUSEUM.—Records. Vol. i. Nos. 2–6.
- From the ANTHROPOLOGICAL SOCIETY OF BOMBAY.—Journal. Vol. i. Nos. 1–4, 6–8. Vol. ii. Nos. 2–4.
- From the ANTHROPOLOGICAL SOCIETY OF WASHINGTON.—The American Anthropologist. Vol. iv. No. 2.
- From the BERLINER GESELLSCHAFT FÜR ANTHROPOLOGIE, ETHNOLOGIE, UND URGESCHICHTE.—Zeitschrift für Ethnologie. 1891. Heft 2. Nachrichten über deutsche Alterthumsfunde. 1890. Heft 5, 6. 1891. Heft 1, 2.
- From the GEOGRAPHISCHE GESELLSCHAFT (Berne).—Jahresbericht. Band ix.

- From the K. K. GEOGRAPHISCHE GESELLSCHAFT IN WIEN.—Mittheilungen. 1890.
From the ROYAL GEOGRAPHICAL SOCIETY.—Proceedings. Vol. xiii. No. 6.
From the ROYAL SCOTTISH GEOGRAPHICAL SOCIETY.—The Scottish Geographical Magazine. Vol. vii. No. 6.
From the ROYAL SOCIETY.—Proceedings. Vol. xlix. No. 299.
From the ROYAL SOCIETY OF ANTIQUARIES OF IRELAND.—Journal of the Proceedings. Fifth Series. Vol. i. No. 5.
From the SOCIETY OF ARTS.—Journal. Vol. xxxix. Nos. 2008–2011.
From the SOCIETY OF BIBLICAL ARCHEOLOGY.—Proceedings. Vol. xiii. Part 7.
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The Rev. JAMES SIBREE read a paper on “Curious Words and Customs connected with Royalty and Chieftainship among the Hova and other Malagasy Tribes.”

The PRESIDENT, Mr. LEWIS, and Mr. GOMME joined in the discussion, and the Author replied.

Mr. SIBREE read a paper on “Decorative Carving on Wood, especially on the Burial Memorials of the Bètsilèo Malagasy ; with illustrative rubbings.”

Miss BUCKLAND, Mr. H. BALFOUR, Mr. ATKINSON, and Dr. TYLOR took part in the discussion.

*CURIOUS WORDS and CUSTOMS connected with CHIEFTAINSHIP
and ROYALTY among the MALAGASY.*

By the Rev. JAMES SIBREE, F.R.G.S.

THE two short papers which I have the honour to read before you this evening both refer to some of the tribes of the great African island of Madagascar, with which I have been more or less closely connected for the last twenty-eight years, residing for the greater part of that time, as a missionary of the London Missionary Society, in or near the capital city of Antananarivo. The first paper refers to some peculiar words and customs in use among the Hova, or people of the central province of Imèrina, and also among the Bètsilèo, the tribe of the district to the south of this first-named province. The Hova are probably the latest and purest Malayan or high er Polynesian immigrants ; they are also the most advanced, intelligent, and civilised of the various Malagasy tribes ; among them education and Christianity have made the greatest

progress; and, since the beginning of this century, they have become the dominant tribe of the country, and their queen is sovereign of the greater part of the island.

The Bètsilèo are a darker race than the Hova, being probably descended from Melanesian ancestors, or from a mixture of the dark and light Pacific islanders; they are also taller and perhaps stronger than their northern neighbours, although, owing to the superior discipline of the Hova soldiers, they were subdued by them about eighty years ago, and have ever since been obedient subjects to the sovereign at Antanànarivo. They appear to me, as well as to others who have lived both in Imèrina and in the Bètsilèo province, to be less intelligent than the Hova, but possibly this may be because their advantages have been less. Among them, however, very satisfactory progress is being made, and both the London Missionary Society and the Norwegian Lutheran Mission have a large number of congregations and many thousands of children in their schools.

The second paper refers almost entirely to an indigenous art developed among these Bètsilèo people.

It is a fact well known to all philologists that in several groups of language there are found classes of words which are only used by the people when speaking of their sovereigns or chiefs, with regard to their persons, their actions, and their surroundings, as well as to the honours paid to them both when they are living and after their death. And these special words are in some countries used not only in matters relating to the sovereign and the chiefs, but also in those referring to the members of their families. In certain languages (*e.g.*, in those of some of the Pacific groups) such special words are found applying not only to a few actions, or parts of the body, &c., of the chiefs, but they occur in such a large number as to form a distinct dialect, or kind of "court language," used by the higher classes, or by others of lower rank when speaking to them. A further elaboration of this specialized speech is found in some islands where no less than three distinct dialects occur: one used by, or in speaking to, the king or principal chief; another, in use by, or in matters relating to, the secondary chiefs; and a third employed by the mass of the people.

These peculiarities of speech are found, I believe, more or less developed over the whole Malayo-Polynesian family of languages, and they accordingly make their appearance also in Malagasy, as a member of that great stock of human speech. In Madagascar, however, they have never been developed to the

extent just described as found in some of the Pacific islands ; but for a long time past it has been known that in the central province of Imèrina there are a number of such specialized words which are employed with regard to the sovereign, and these have probably been in use for centuries as applied to the chiefs of the central province. It will be seen that these are not words which are not also employed with regard to ordinary persons or things or actions, but are almost all of them commonly used words which have gained a special and different meaning when applied to the sovereign.

The more noticeable of these words are connected with the illness, decease, and burial ceremonies of a Malagasy sovereign, although there are also two or three which are applied to the living king or queen. (Perhaps, however, these are more of the nature of honorific titles than strictly coming within the class of words we are here discussing.) Thus, an old word for a sovereign is *Ampingàra-bôlamèna*, literally, "golden gun," the first part of the phrase being taken from the Portuguese *espingarda*, so that this term is not of more ancient origin than about three centuries ago, or, at most, three centuries and a half. Another term applied to the sovereign is *Fâhiray*, "first," a word which is not used with regard to things generally, although it is formed strictly according to the rule for making ordinal from cardinal numbers (e.g., *fâharà*, second, from *rà*, two ; *fâhatélo*, third, from *télo*, three), the word *voalôhany*, (*vôa*, fruit, *lôha*, head) being always used for "first."¹ A term sometimes applied to the queen by elderly officers in public speeches seems to our notions somewhat impertinently familiar, viz., *Ikàlatôkana* ; in ordinary talk by the people this means "our only lass," and the word *ikàla* is often applied also to hens. If one might venture on such a free translation, it seems to mean (not "cock of the walk," but) "hen of the roosting-place." It is, however, very like, in its free familiarity, the use of the word *Ialôhy* ("you fellow") to the former kings by some of their most privileged councillors. The members of the royal family are termed *Atinandràna* (lit. "the liver," or "inside," of the sovereign or chief). And among some tribes the chiefs are termed *Màsondràno*, i.e., "water channels," through whom

¹ A curious word for chiefs and their wives is used by the Bàra, Sàkalàva and some other Malagasy tribes, viz., *biby*, which in Imèrina usually means "animal," "beast," or, as an adjective, "sensual," "brutal" ; although it is also used there of children as well, probably much in the same way as words of an unpleasant (and even nasty) meaning are often applied to children and infants from fear of some envious and malign influence, such as the "evil eye." Perhaps, however, it is really a word of entirely different origin, from the Swahili *biby*, "my lady," "my mistress."

all benefits are supposed to be derived, as the water flows along the bed of a river.

Returning, however, to the more exact illustrations of the subject, a Malagasy king or queen is not said to be "ill" (*marary*), but "rather warm" (*mafūnafāna*). Also they do not "die" (*màty*), but are said to "retire," or "to turn the back" (*miambōho*). In parts of Madagascar distant from Imèrina, the word *fōlaka* (bent, broken, weakened) is employed in speaking of a deceased chief. (With regard to people generally, among the Tanàla and other tribes, the phrase, *fōla-mànta* [*mànta*, raw] is used for sudden death; *fōlaka an-dàntony* [*làntony*, the fore-arm?], for dying young; while *trāno fōlaka* is the house [*trāno*] where a corpse lies in state.) Then the dead body of a sovereign is not termed a "corpse" (*fàty*), but "the sacred thing"¹ (*ny māsina*). The late Queen Rànavàlona II., who died in 1883, is always spoken of as *Ny Māsina* in the government gazette and in proclamations, as well as by the people generally in ordinary conversation. There is among the Hova, as well as among the other Malagasy tribes, a deep sense of "the divinity that doth hedge a king"; and until the acceptance of Christianity by the late queen and her government, the Hova sovereigns were termed "the visible God" (*Andriamānitra hita māsō*); other terms of similar import were also applied to them. In accordance also with this same belief, upon the stone structure covering the chamber formed of slabs of undressed rock, where the royal corpse is deposited, a small timber-framed building is erected, which is called the "sacred house" (*trāno māsina*). This is in appearance exactly like the old style of native house, made of timber framing, with walls of thick upright planking, and high-pitched roof covered with wooden shingles. This distinction of having a timber house built upon the stone tomb is also shared by the higher ranks of nobles, who, it should be remembered, are descended from ancient kings in Imèrina.

When the corpse of a sovereign is lying in state, the women in their various divisions or tribes are expected to come in relays to mourn; but this ceremonial mourning is not called by its usual name (*misaona*), but the people are said to "present" or "offer tears" (*miāti-drānomāsō*). Then again, a sovereign is not said to be "buried" (*alévina*), but is "hidden" (*afénina*); and the massive silver coffin made of dollars hammered into plates, in which most of the Hova kings or queens in more recent times have been buried, is called the "silver canoe" (*lakam-bōla*), a word in which a little bit of

¹ *Māsina*, however, except in very modern Malagasy, does not mean "holy," but consecrated, set apart, established, confirmed.

history is doubtless preserved; a remembrance of a former period when the Hova were not, as they are now, an inland people, but a coast-dwelling or an island tribe, and buried their dead in an old canoe, as is still the custom with the Sàkalava,¹ the Bétsimisaraka, and other Malagasy peoples living on the coast.²

When the royal corpse has been deposited in its last resting-place, and the stonework at the entrance to the tomb is being closed up again, this act is called "stopping up the sun" (*tàmpi-màsoàndro*); the sovereign being "the sun," the light and warmth of his people, and was formerly often so termed in public speeches.³ Much the same idea appears in the phrase used by some of the coast tribes in speaking of the decease of their chiefs, viz., "the king is reclining," or "leaning on one side" (*mihlana ny ampanjaka*). This same word is used in Imèrina to denote the afternoon, the "decline of the day" (*mihlana ny àndro*). A very bold and poetical figure is also employed to express the general mourning at the decease of a sovereign, *Mihohoka ny tany àman-dànitra*, i.e., "Heaven and earth are turned upside down"! This is not the place to describe in detail the many and curious ceremonies, as well as the numerous things prohibited to be done, at the decease of a Malagasy king or queen; suffice it to say that, with very few exceptions, everyone's head had to be shaved; no hat could be worn or umbrella carried; the *lamba* only (no European dress) could be worn, and this had to be bound under the armpits, leaving the shoulders uncovered; all singing, dancing, or playing of musical instruments was prohibited, as well as the practice of many handicrafts, as spinning, weaving, making of pottery, gold and silver work, &c.⁴ Of course some occupations could not be altogether abandoned, such as the tilling of the soil, sowing and planting rice, &c.; but such work was not called by the usual terms, but was mentioned as *milatsaka an-tsàhu*, i.e., "going into the country," or "settling down in the fields." So also, the usual word for "market" (*tsena*) is not employed during the time of public mourning, but these great concourses

¹ See "Antanànarivo Annual," VIII, 1884, p. 67.

² A somewhat similar historical fragment lies under the word used for the water used in the circumcision ceremonies: it is termed *ràno mäsina*, "salt water," and in the case of children who are heirs to the throne, it must actually be fetched from the sea (*rànompäsina*). Doubtless sea water was formerly used in all such cases while the Hova were still a shore-dwelling tribe.

³ And so, concealing property due to the sovereign, or peculation of government dues, is termed *manao màsoàndro an-kàrona*, i.e., "putting the sun into a basket."

⁴ See a very full account of the funeral ceremonies at the death of Radàma I in Tyerman and Bennet's "Voyages and Travels round the World," 2nd edition, pp. 284-286.

of people are called simply "meetings," or "places of resort" (*fihaonana*). They are also called *tsèna mālakhèlo*, "sorrowful markets." In speaking of the death of relatives of the sovereign, they are not said to be dead, but "absent," or "missing" (*diso*). The same figurative phrase as is used by ourselves in speaking of friends or relatives who are dead as "departed," is also employed by the Malagasy, who say their friends are *lāsa*, "gone"; they also speak of them as *rèraka*, i.e., "faint," "exhausted," and as *lātsaka*, i.e., "fallen," or "laid down"; while the surviving members of a family of which some are dead are spoken of as "not up to the right number" (*lātsak' isa*).¹ With regard to the ordinary people also, their dead relatives are said to be "lost" (*vèry*), and "finished," or "done" (*vita*); and also *lāsan-ko ràzana*, i.e., "gone to become ancestors."

Although not strictly included in the present subject, it may be remarked that the same use of euphemistic expressions as those just mentioned with regard to death, is also seen in those used by the Malagasy in speaking of things they have a great dread of, especially small-pox, which, before the introduction of vaccination, often made fearful ravages in Imèrina, as it still occasionally does among the coast tribes. This terrible disease is called *bélémby*, i.e., "greatly deserted," no doubt from the condition of the villages where it had appeared. It is also called *lavira*, an imperative or optative formed from the adjective *lavitra*, "far off," and thus meaning "be far away!" or "avaunt!" A feeling of delicacy causes other euphemisms, such as the phrase *didiam-pòitra*, literally, "cutting the navel," instead of *fóra* and other terms denoting the circumcision ceremonies.

The use of some special words, as applied to certain classes of royal servants or attendants, may here be noticed; although possibly these also are not, speaking exactly, of the class of euphemistic expressions like the majority of those described above. Thus, the royal cooks are termed the "clean-handed ones" (*madro tànana*); describing, no doubt, what they *should* be, even if they occasionally are not exactly what their name implies. Again, some companies of royal guards a few years ago were termed the "sharp ones" (*marànitra*; cf. Eng. "sharpshooters"?). The government couriers in the provinces are called *keli-lohàlika*, lit. "little-kneed"; while a class of palace servants in constant attendance on the sovereign, and from whom the queen's messengers are chosen, are the *tsimandó*, or *tsimandao*, i.e., "never forsaking," because some of them are

¹ A very poetical expression, in which the word *lātsaka* also occurs, is used in speaking of the dead, who are said to be as "Salt fallen into water which cannot be salt again" ("*Sira lātsaka an-dràno ka tsy himpódý intsony*").

always in attendance, day and night, upon the sovereign. The queen's representatives at distant places are called *màsoivòho*, i.e., "eyes behind"; but this word is also now used in the more general sense of an "agent" of other persons besides those of the sovereign.

It is an ancient custom that members of the royal family, and of the next highest class of *andriana*, or nobles (the *Zanak' Andriamàsinavalona*), who happen to have committed serious offences, are not put into iron fetters, but are bound with cords. And when any subject of high position is accused of crime, a spear with silver blade, engraved with the name of the sovereign, is carried by government officers and fixed in the ground opposite the door of the accused person's house. This spear is called *Tsitàlainga*, i.e., "hater of lies"; and while it remains so fixed no inmate of the house can leave it. Among the Taimòro chiefs, a house set apart for their wives who are of noble birth, is called *Fenovòla*, i.e., "full of money."

The rapacious character of the upper classes among the Malagasy is significantly shown by a provincial name given to the chief people, viz., *aràralàhy*, i.e., "gluttonous, eager to take one's share before others." The despotic nature of Malagasy sovereigns is clearly shown in many native proverbs; e.g., "*Ny manjàka toy ny lànitra, ka tsy azo refesina; toy ny màsoàndro, ka tsy azo tohaina*," i.e., "The sovereign is like the sky, and cannot be measured; like the sun, and cannot be contended with."

Another fact with regard to royalty may be recorded. During the reign of Queen Rasohèrina (1863-1868), a new royal house was erected in the palace yard at Antanànarivo, as is customary when a new sovereign comes to the throne. But in this case, the standard for all the chief dimensions of the building was the *réfy*, or fathom, as measured by the queen herself, between the tips of her fingers when the arms were stretched to their full extent, in her majesty's case, about 5 feet 8 inches in length. And it was a matter of no small trouble and annoyance to Mr. J. Cameron, who designed and superintended the building, to make all his dimensions in accordance with the standard. He had, in fact, to make a new scale, for all the principal dimensions of the palace, and of its verandahs, doors, windows, &c., were multiples or fractions of the queen's personal *réfy*, as measured by herself.

The illustrations already given are numerous enough to show that the use of special words, or of common words in a special sense, as applied to matters relating to royalty, is a distinct feature in the Hova dialect of Malagasy. Some little time ago, in talking to a class of my students in the London Missionary

Society's College at Antananarivo about this peculiarity of their language, I happened to remark upon it as one which Malagasy had in common with many of the Malayo-Polynesian languages, but said that it seemed to be far less developed in Madagascar than in many of the Pacific groups. Hereupon one of the young men, named Rajaonary, a student from North Bètsilèo, told me that such special words, as applied to the chiefs, were a very marked feature in the speech of the Bètsilèo people, and that in fact there were a much larger number of these words employed in the southern province than were in use among the Hova. He gave me at the same time a number of examples; and I then asked him to note down these words, which he accordingly did in a few days, writing quite a small essay on the subject. This seems to me so well worth preserving in an English dress, that I shall now proceed to translate it. He entitles it:

"SPECIAL WORDS EMPLOYED AMONG THE BÈTSILÈO WITH
REFERENCE TO THEIR CHIEFS.

"The Bètsilèo are a people who pay extraordinary respect to their chiefs, and from this fact everything relating to them is a thing kept specially for them, and is not allowed to be mixed up with what belongs to the mass of the people. The chiefs' houses, although there is very little difference between them and those of the people generally, are like something sacred or set apart in a special manner, so that no one can enter them at will, but only after having asked and obtained leave of the chief, or after being summoned by him. And again, after having entered, no one can push himself forward north of the hearth,¹ or stand idly about, but must sit quietly and respectfully south of the hearth. And in the same manner also, the things in the house are set apart, for the drinking-tin, the spoons, the plates, &c., cannot be handled or put to the lips; for if any one drinks from them, the hand must be held to the mouth, and the water then poured into it from above. The chief's bedstead cannot be used by any person except one who is also a chief. The mat on which a chief sits in his house must not be trodden upon, but must be lifted up in passing, and cannot be sat upon by any one but himself. And all the furniture in the house is like something sacred, and must not be lightly touched when carried outside, for those who receive it are warned by the words '*an-dàpa*' ('belonging to the palace'), that they may take care of it. And not only are the things in the chief's house thus set apart for his own use, but also even those in the people's houses,

¹ The place of honour in a Malagasy house.

should the chief have chanced to use them ; and even their own drinking-tins, ladles, &c., are often kept untouched by the lips, lest the chief should chance to pass by and require them, so that the Bètsilèo are accustomed to drink water out of their hands.

“ But not only are *things* thus kept by the Bètsilèo for special use by their chiefs, but many *words* are also set apart for them, both the names for certain things and other words as well. These may be divided into three classes, as follows :—

“ 1.—*Words specially applied to the Family of Chiefs*, from their birth until maturity, but while their parents are still living. See the following :—

Ordinary Bètsilèo word.	English.	Word used for the Children of Chiefs.	Literal Meaning.
<i>Kilonga</i>	Children	<i>Anakoa</i>	Child of the Hova. ¹
<i>Mihinana</i>	To eat	<i>Misoa</i>	<i>Soa</i> , in Hova, good, pleasant.
<i>Fàna</i>	Plate or dish	<i>Fisoavana</i>	Verbal noun from above.
<i>Felôna</i>	Farewell	<i>Mahazoa nàno masina</i>	Lit. ‘May you get a sacred nipple.’ ²
<i>Mitèraka</i>	To bear offspring	<i>Mandina</i>	To cause to descend.
<i>Maty</i>	Dead	<i>Folaka</i>	Bent, broken, weakened, see p. ante.
<i>Fàty</i>	Corpse	<i>Folajolaka</i>	Broken or bent money.

“ 2.—*Words specially applied to Elderly Chiefs*, that is, those who are too old to have their father and mother still living. When that is the case, there is a considerable change made in the names given to the parts of the body, as well as in certain words describing their actions and their condition. This will be seen by the following list :—

Ordinary Bètsilèo word.	English.	Word used for Elderly Chiefs.	Literal Meaning.
<i>Antitita</i>	Old	<i>Miasina</i>	Sacred, established, &c., see p. 218.
<i>Anakaandriana</i>	An adult man (lit. ‘child of the chief’) ³	<i>Hova, or ny andrian-dahy</i>	Hova (see ante), or the prince.
<i>Andranobé</i> (wife of above)	An adult woman (lit. ‘at the great house’)	<i>Hova, or ny andrian-baey</i>	Hova, or the princess.
<i>Lôha</i>	Head	<i>Kabèso</i>	Brains (?)
<i>Miso</i>	Eye	<i>Fonilo</i>	Torch. ⁴
<i>Sofina</i>	Ear	<i>Fihonbona</i>	The listening (or listener).
<i>Tanana</i>	Hand	<i>Fantray</i>	The taker.
<i>Tongotra</i>	Foot	<i>Fandia</i>	The treader.
<i>Ny</i>	Tooth	<i>Fandea</i>	A flag (lit. the hoverer).
<i>Tôka</i>	Belly	<i>Faofaotra</i>	<i>Sofa</i> is ‘rubbing,’ ‘caressing.’
<i>Mahmana</i>	To eat	<i>Mifanjoitra</i>	(?)
<i>Fàna</i>	Dish, plate	<i>Fijonjorona</i>	(?) Verbal noun from preceding word.
<i>Mipètraka</i>	To sit	<i>Miarina</i>	To be erect (in Hova).
<i>Mandeha</i>	To go	<i>Mamindra</i>	To remove (do.)

¹ The word *Hova* seems to convey the idea of “ noble,” “ princely,” in many of the non-Hova tribes. So, when the Bètsilèo salute any of their own chiefs, they say “*Manao akôry ny Hova é?*” i.e., “How is the Hova?”

² Cf. Isa. lx, 16 : “Thou shalt also suck the milk of the Gentiles, and shalt suck the breasts of kings.”

³ This phrase is customary in public speaking as a mark of respect to the chief’s children, when deprecating blame as is always done in the opening sentences of a *kabàry*, or public speech.

⁴ Cf. “The light of the body is the eye.”

Ordinary Betsileo word.	English.	Word used for Elderly Chiefs.	Literal Meaning.
<i>Mandry</i> , or <i>Ma- tory</i>	To lie down, to sleep	<i>Mirôtra</i>	(?)
<i>Favajâra</i>	Bedstead	<i>Filânana</i>	Place of desire (?)
<i>Vidy</i>	Husband or wife	<i>Fidâna</i>	A ford (in Hova).
<i>Idaty</i>	Dead	<i>Véty</i>	Lost.
<i>Fûty</i>	Corpse	<i>Hacérâna</i>	The losing, from <i>very</i> , lost, see preceding word.
<i>Veloma</i>	Farewell (lit. 'may you live')	<i>Masina</i>	Be sacred, established, &c.
<i>Akôry angharéo</i> ? ¹	How are you?	<i>Manao akôry ny rô- tana</i> ?	How did you sleep? (see above, <i>mirôtra</i> .)

[It will be seen from the above list that several of the words for the parts of the body—the eye, the ear, the hand, the foot—are simply words describing the actual office of those members, as light-giving, means of hearing, taking, treading, &c. Probably the very general practice of tabooing (making *fady*) words which form the names or parts of the names of chiefs (which we shall notice again further on) has had influence in producing some of these specialized words.]

* 3.—*Words specially applied to Chiefs, whether Old or Young.*

Ordinary Betsileo word.	English.	Word used for Chiefs.	Literal Meaning.
<i>Trâao</i>	House	<i>Lapa</i>	? Also used in Imérina.
<i>Marâry</i>	Ill, unwell	<i>Mandô</i>	To shade, to shelter.
<i>Mijalo</i>	To nurse (the sick)	<i>Miti ambo</i>	?
<i>Miandravana</i>	To sing at a funeral	<i>Manipotraka</i>	?
<i>Tranoôrôna</i>	Bier, lit. 'bird house'	<i>Tranoôtana</i>	The finished house (?)
<i>Mahy</i>	To lie in state	<i>Manpiary</i>	To cause to go round about. ³
<i>Fâstna</i>	Tomb	<i>Tranomèna</i>	Red house. ⁴
<i>Mandécina</i>	To bury	<i>Maniritra</i>	To plunge, to dive; in Imérina the phrase <i>an-tritra</i> is used to describe the temporary burial of a corpse until the proper tomb is completed.

"The poles on which a chief's corpse is carried to burial are termed *hâzomâsina*, 'sacred wood'; and the water into which they are cast away after the funeral is called *rânôdritra*, 'water of endurance' ? (*âritra*, endurance, patience, &c.). When the dead from among the common people are spoken of, the words *Raivelona* ('Living father') or *Rénivelona* ('Living mother') are prefixed to their names: but in the case of deceased chiefs, the word *Zânahàry* (God, lit. Creator) is prefixed to their names

¹ Sometimes this salutation of the common people is substituted by the phrase: "*Akôry ny nandriangharéo*?" a phrase of the same meaning as the one addressed to the chief, only that the ordinary word *mândry* is here kept instead of the special one *mirôtra*.

² In Hova *hôtaka* means "boiling," but perhaps there is no connection between the two words.

³ Scarlet is the royal colour in Madagascar; at the funeral of Radâma I, one of the large palaces, in which he lay in state, was draped from the ridge of the roof to the ground with scarlet cloth; the sovereign alone has a large scarlet umbrella carried over her, and dresses in a scarlet *lamba* or robe.

⁴ See Mr. Richardson's description of Betsileo funeral ceremonies, "*Antanà-narivo Annual*," I, p. 71, Reprint, p. 74.)

when they are spoken of; in the same way as the word *Rabevòina* ('The one overtaken by much calamity'?), is employed by the Hova in speaking of the departed, or simply, *Itòmpokolàhy* ('Sir,' or 'my lord'), or *Itòmpokoràvy* ('Madam,' 'or my lady').

"These then are the special words used by the Bètsilèo with regard to their chiefs; but what can be the reason of their giving them such extreme honour? It is this:—

"The chiefs of the Bètsilèo are considered as far above the common people, and are looked upon almost as if they were gods. If anything angers a chief and he curses, the people consider the words he speaks as unalterable and must surely be fulfilled; so the persons whom he may chance to curse are exceedingly afraid and in deep distress. And, on the other hand, if anything pleases him, and he thanks (*lit.* 'blesses') any one, then those who receive his blessing are exceedingly glad, because they suppose that that also must certainly be fulfilled. For the chiefs are supposed to have power as regards the words they utter, not, however, merely the power which a king possesses, but power like that of God; a power which works of itself on account of its inherent virtue, and not power exerted through soldiers and strong servants. Besides which, when a person is accused by another of having done evil, and he denies it, he is bidden to lick (or kiss) the back of the hand of the chief, or to measure his house,¹ and to imprecate evil (on himself) while doing it. In this way, so they say, it is found out whether he really has committed the offence, or not: if he did offend and yet still persists in denying it, then it is believed that the curse he invoked when licking the hand of the chief, or when measuring his house, will return upon him; if, on the contrary, he is innocent, he will remain unharmed. In like manner also, the chief is supposed to have power which works of itself, on account of his sacred character, to convict of any secret fault. And when the chiefs die, they are supposed to really become God, and to be able to bless their subjects who are still living; and the reverence in which they are held is extreme, for when their name chances to be mentioned, the utmost respect is paid to it both before and after the utterance of it: before it, the words *Ny Zànahàry* (God) must be prefixed, and after it the following words are added: 'May the mouth strike on the rock, and the teeth flow with blood, for he has gone to be God'²

¹ Measuring the tomb of their master is, I am told, a practice followed by slaves in Imèrina as an invocation of evil on themselves if they have really done something of which they are accused.

² "*Mikapoka any ny tato ny rava, ary mandehana ra ny nify, fa efa lasan-ko Andriamanitra izy.*"

(the speaker's mouth and teeth being meant). And when the chief's grave is cleared of weeds and rubbish, the people dare not do that unless they have first killed oxen and made supplication with outstretched hands to the deceased.

"The belief of the Bètsiléo that their chiefs are so sacred and exalted as here described is therefore the reason of their setting apart so many things specially for them, whether actions or words. It must, however, be said that it is the customs of the northern Bètsiléo which have mostly been here noted, although probably they do not greatly differ from those in the southern part of the province."

While considering the customs connected with Malagasy royalty and chieftainship, a few remarks may be here made about the practice of tabooing—or making *fady*—the words or parts of words which happen to form the names of chiefs. This appears to be prevalent all over Madagascar, and is a custom the Malagasy have in common with many of the Oceanic races with which they are so closely connected. There are no family names in Madagascar (although there *are* tribal ones, and although also, one name or part of a name is often seen in a variety of combination among members of the same family),¹ and almost every personal name has some distinct meaning, being part of the living and still spoken language, either as names of things—birds, beasts, plants, trees, inanimate objects, or names describing colour, quality, &c., or words which denote actions of various kinds. (There are a few exceptions to this—a few names which embody obsolete or obscure words or forms of the verb—but they do not affect the general rule here laid down.) So that the names of the chiefs almost always contain some word which is in common use by the people. In such a case, however, the ordinary word by which such thing or action has hitherto been known must be changed for another, which henceforth takes its place in daily speech. Thus, when the Princess Rabôdo became queen in 1863, at the decease of Radâma II, she took a new name, Rasohérina (or, in fuller form, Rasohéri-manjaka). Now *sohérina* is the word for chrysalis, especially for that of the silkworm moth; but having been dignified by being chosen as the royal name, it became sacred (*fady*) and must no longer be employed for common use; and the chrysalis thenceforth was termed *zàna-dàndy*, "offspring of silk." So again, if a chief had or took the name of an animal, say of the dog (*ambôa*), and was known as Rambôa, the animal would be henceforth called by another

¹ Thus, a friend of mine at Ambôhimànga who is called Rainizaivêlo, has four daughters named respectively Razaivêlo, Raovêlo, Ravêlonôro, and Randrovêlo

name, probably a descriptive one, such as *fandròaka*, i.e., "the driver away," or *fandro*, "the barker," &c. Some of the Bètsilèo specialized words already given in the second section of Rajaonàry's paper (*ante*, p. 223) have probably originated somewhat in this way.

It may be remarked parenthetically here that among certain Sàkalàva tribes (and probably among many other Malagasy races as well) certain birds and animals are *fady*, sacred or tabooed, by the chiefs and their families. Thus, the *Boldky* or sooty parrot¹ is *fady* to one of the Vèzo royal families,² and the *Toldho* or lark-heeled cuckoo³ is sacred to one of the chief families of Mènabé, further north. Some have thought that we have here a relic of the system of totem, but the subject needs further investigation. A very curious superstition among the Bètsilèo and some other tribes is, that from the putrid liquid exuding from the corpses of their chiefs a serpent called *fanàny* is produced, and that this is an embodiment of the spirit of the departed. It is supposed to take up its abode near the tribe and to act as their protector.

As far as we can ascertain, this tabooing of words in the names of chiefs seems hardly to have been carried out by the Hova to such an extent as it is, or has been, by the other Malagasy tribes; although possibly this seeming exception is only due to that centralization of authority in Imèrina which has been going on for nearly two centuries, and which has gradually diminished the practice, and has thus reduced to a minimum the variety of nomenclature it would otherwise cause. With one sovereign, instead of a great number of petty chiefs or kings, the changes would of course be minute and would leave no great impression on the language. For we can easily conceive what an annoying confusion and uncertainty would be introduced into a language by a very wide extension of such tabooed words arising from a multiplicity of chiefs. It is as if we in England had had to avoid, and make substitutes for, all such words as "*geology*," "*geography*," &c., because they formed part of the name of King George; and such words as "*will*," "*willing*," "*wilful*," &c., because they were part of the name of King William; or had now to taboo words like "*victory*," "*victim*," "*convict*," &c., because these syllables form part of the name of Queen Victoria. What a nuisance should we not consider it! yet there are tribes and people who now live under this tyranny of words, as their fathers have done for unknown centuries in the past. It can hardly be doubted that this fashion in language has done very much to differentiate the

¹ *Coracopsis obscura*.

² South-west coast.

³ *Centropus tolou*.

various dialects found in Madagascar; and it is a matter for some surprise that there is not a much greater diversity among them than we find to be actually the case.

Among the western tribes of the country, on account of the large number of petty but independent and absolute kings, a great deal of change in the spoken language does take place. Mr. Hastie, who was British Agent at the Court of Radama I, and accompanied that king on some of his expeditions into the west, says: "The chieftains of the Sakalava are averse that any name or term should approach in sound either the name of themselves or any part of their family. Hence, when it was determined that the mother of Rataratsa, who came unexpectedly into the world, should be named Ravahiny [*vahiny*, a stranger], it was forbidden that the term *vahiny* should be applied to any other person except herself, and the word *ampainsick*¹ was instituted to denominate "stranger." From similar causes the names of rivers, places, and things have suffered so many changes on the western coast, that frequent confusion occurs; for, after being prohibited by their chieftains from giving to any particular terms the accustomed signification, the natives will not acknowledge to have ever known them in their former sense."

It may be here noticed that it is considered highly improper to use the name of the sovereign frequently or lightly in ordinary conversation; and Europeans happening to do this, through ignorance of native customs, have been requested to desist by Malagasy officers who chanced to be present. The royal name has a kind of sanctity and must not be taken in vain. This reverence for royalty extends also to royal property. For instance, it is a gross breach of propriety to sit or step upon a box or case containing anything belonging to or being sent to the sovereign. And when anything belonging to the queen is being carried or driven along the high road, whether cases, or water-pots, or bullocks, all passers-by must turn out of the road, or stop close to the side of the path, and remove their hats until the royal property has passed by. Further, it is improper to compare any other building to the royal palaces, or to use it as a standard of height and size; and it is little short of a crime to fire off a gun in the direction of the palace, as this would be a sort of threatening or defying its august owner. The sovereign must sit in the highest place in any public assembly, and accordingly, in the queen's pew in the Chapel Royal at Antananarivo, her majesty's seat is higher than the pulpit; while at the opening of one of our Memorial Churches at the capital a few

¹ In Dalmond's "Vocabulaire Malgache-Française pour les langues Sakalave et Betsimitsara," p. 5, I find this word thus given: "Ampentzek, s. Neuf, enouveau, nouvel arrivé."

years ago, the late queen's seat was placed in the gallery of the transept, so that no subject might sit higher than their sovereign.

One more point as to Malagasy royal names may be mentioned. Among the Sàkalàva the chiefs' names are changed as well as among the Hova, not, however, at their accession to power, but after their death. A new name is then given to them, by which they are ever afterwards known, and it is a crime to utter the name by which they were called when still living. These posthumous names all begin with *Andriana* (prince) and end with *arivo* (a thousand), signifying that such a chief was a "prince ruling over," or "loved by," or "feared by," or "regretted, by thousands," of his subjects. Thus, a chief called Raimòsa while living was called Andriamandionarivo after death; another, called at first Mikàla, was after death known only as Andrianitsòanarivo. M. Guillain says: "This custom was not confined to the Sàkalàva; it existed among the different populations of the south of the island, in Fiherènana, Mähafàly, and Andròy." Drury, who lived as a slave for fifteen years in Madagascar, from 1702 to 1717, also says of the south-western tribes: "They invoke the souls of their ancestors, and hold them in great veneration; they call them by names which they give them after their death, and even regard it as a crime to mention them by that which they bore when living; and these names are principally characterized by the word *arivou*, which terminates them."

DISCUSSION.

Mr. LEWIS asked whether, as the chief was considered the sun and light of his people, the north side of the house was allotted to him in consequence of the sun's course being on the north side of the island, or whether Mr. Sibree could assign any other reason?

Mr. SIBREE did not think there was any significance or connection with sun worship in the north-east corner of the house being the sacred corner, and the northern end, or further part, beyond the hearth, being the place of honour. It seemed to him that it simply arises from the construction of Hova houses and those of other inland tribes; they are always built (or rather, *were*, before the introduction of glass for windows) north and south, the single door and window being on the western side, so as to protect the inmates from the cold south-east trade wind. On the south and east sides of old-fashioned houses there are no openings at all. The north-east corner is therefore the warmest, most sheltered part of the house, and there is the fixed bedstead,

the household charms are placed there, and there also invocations are made and prayers offered.

In reply to a question of the Chairman as to the Malagasy word for "gold," Mr. Sibree said that this was *vôlamèna*, lit. "red money," and probably a comparatively modern introduction; the word for "silver" being *vôlafôtsy*, "white money."

DECORATIVE CARVING on WOOD, *especially on their* BURIAL
MEMORIALS, *by the* BÊTSILÈO MALAGASY.

[WITH PLATES XVI AND XVII.]

By the Rev. JAMES SIBREE.

BEFORE speaking of the subject proper of this paper, I should preface it by saying that it ought to have been read by my friend and brother missionary, the Rev. G. A. Shaw, and not by myself. Four or five years ago, when he was still in England, a meeting was arranged by Professor Max Müller, I believe in connection with this Institute, at which Mr. Shaw was to have read a paper, or, at least, given a short address, explanatory of the series of rubbings which he made in Madagascar, and which are here exhibited. Unfortunately, Mr. Shaw's engagements were so numerous in connection with the London Missionary Society, that he was unable to attend the meeting which had been proposed for him; and as he afterwards returned to Madagascar, the rubbings have remained in the keeping of your Secretary ever since. I much regret that Mr. Shaw could not himself explain them, as he lived for several years in the Betsilèo province, and had consequently much fuller acquaintance with the subject, than anyone not resident in that part of the country could possibly have. However, I have myself taken great interest in these carvings, and during two journeys made through the district I tried to gain what information I could about these examples of native Malagasy art; so I will make no further apology for submitting what little I know about them to the Institute.

To those who have paid attention to the indigenous art developed amongst the uncivilized races of mankind, and are acquainted with the elaborate and varied ornamentation used by the Malayan, the Polynesian, and the Melanesian tribes, there is something very surprising in the almost total absence of ornamental art amongst the Hova and some of the other peoples inhabiting Madagascar. If we look at any illustrated book describing the inhabitants of the Pacific Islands, or, still better,

Types of Carved Ornamentation (in wood) employed by the

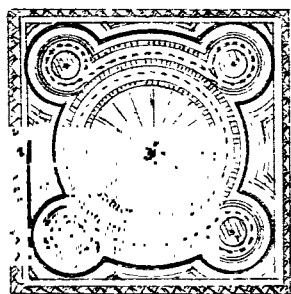


Fig. 1

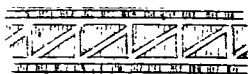


Fig. 2

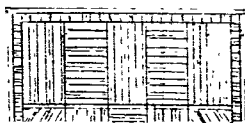


Fig. 3



Fig. 4

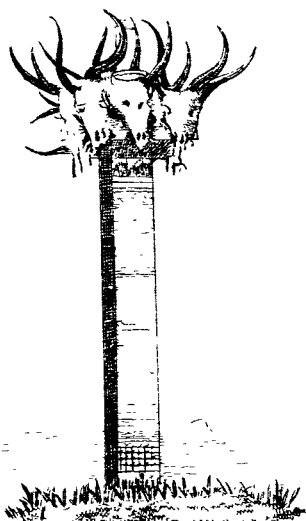


Fig. 8, Memorial Post with Ox skulls.

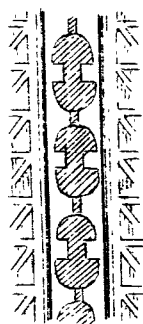
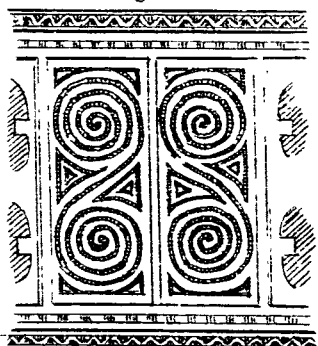
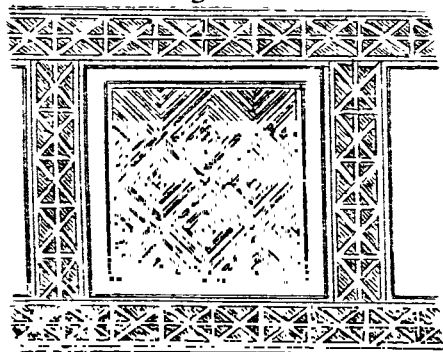


Fig. 5

Fig. 6

Fig. 7



Drawn by James Sibree, chiefly from

Bétsiléó Malagasy in their Burial Memorials and their Houses

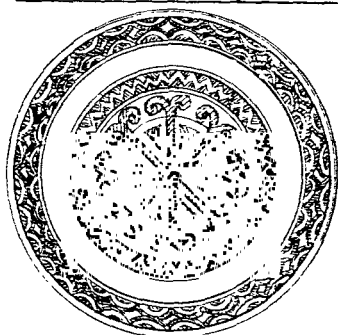


Fig. 9



Fig. 10

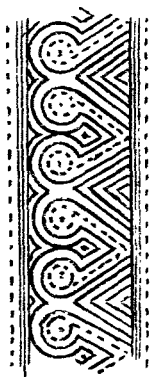


Fig. 11

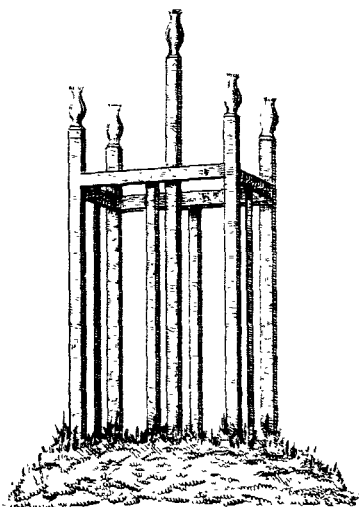


Fig. 15. A Bétsiléó Cenotaph

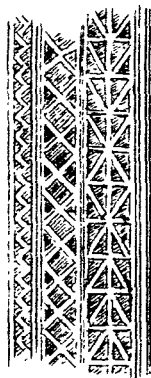


Fig. 12

Fig. 13

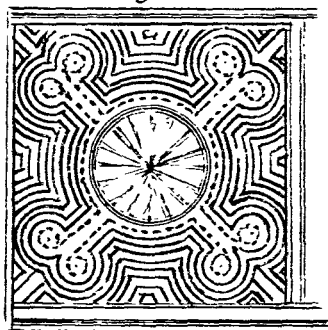
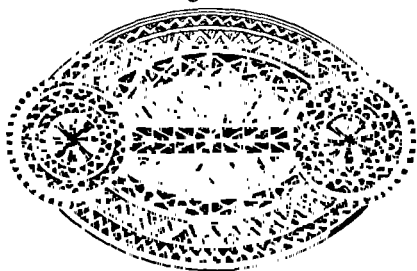


Fig. 14



Rubbings made by George A. Shaw.



if we carefully study the magnificent ethnological galleries of our British Museum, or the Pitt-Rivers collection at Oxford, we shall find that every group, and sometimes every solitary island, has each its peculiar style of ornament, special to itself and easily distinguishable from that of other groups or islands. Their canoes and paddles, clubs and spears, houses and beds, dishes and spoons, pipes and snuff-boxes, gourds and bowls, are all ornamented, sometimes most elaborately and beautifully; and this decoration extends to their own persons in the practice of tattooing, and in the patterns woven into the cloth or matting of their dresses, or stamped upon the bark cloth they procure from various trees. But we see hardly anything of all this in Imérina, the central province of Madagascar. It is true that many of the large stone tombs built of late years have some architectural pretensions, and decorative carving is employed on them, but the details are mostly copied from drawings of European buildings, and cannot be properly considered as examples of indigenous art.¹ I was therefore much interested during a journey to the south of Madagascar, made some fifteen years ago, to discover that amongst the Betsilèo there is a decided and special style of ornament, which is used in their houses, their tombs, and many of their household utensils, as spoons, gourds, dishes, &c.; and that a kind of tattooing is very common amongst them, in which some of the same ornamental details are also introduced. It should perhaps here be noted that this tribe of Malagasy occupy the southern central highlands of Madagascar. They are darker in colour than the Hova, and although physically bigger and stronger, were conquered by them in the early part of the present century. They are variously estimated as numbering from 600,000 to a million and a half. Probably they are really somewhere between these two estimates, *i.e.*, somewhat over a million in num-

¹ The only examples I can recall of anything distinctively characteristic of the Hova Malagasy as regards decoration are: slight ornamentation of the long gable timbers or "horns," and also in the dormer windows, of the old-fashioned native houses, which sometimes have a chevron or "dog-tooth," or small semi-circular ornament cut on their lower edges; also the conventionalized square flower and leaf pattern, used on their finer silk cloths or *lambas*; and, perhaps, some of the patterns in the straw-work of their fine mats and baskets. In the interior ornamentation of some of the royal houses at Antananarivo there seemed to me to be a certain distinct style prevalent. This is chiefly seen in the painted decorations of the upper parts of the walls, and sometimes of the ceilings, which, both in the colouring and large bold style of the patterns, always reminded me somewhat of Assyrian ornament, as shown in the decoration of the palaces at Persepolis. There is very little that is decorative in Hova pottery, but a special kind of vessel made for cooking the beef at the New Year's festival is rather elegant in shape, much resembling some of the Anglo-Saxon pottery. These vessels are circular and somewhat flattened, and are frequently ornamented with a series of lines and zigzags, very closely resembling those on the early fictile productions of the Germanic races.

ber. I had occasionally heard from missionaries who had lived in or visited the Bètsilèo country that there was a good deal of decorative carving in this southern province; and in the "Antanànarivo Annual" for 1875, the Rev. J. Richardson made a slight reference to this in a paper on "Remarkable Burial Customs amongst the Bètsilèo." But no one, so far as I am aware, has yet described at all adequately the character of this ornament, or the different varieties of tombs and burial memorials seen in the Bètsilèo province; and although my observations were only those made on a rapid journey through the country, on my way to the south-east coast, and on a subsequent journey to Fianàrantsoa, the capital of the province, three years ago, they may perhaps have some interest as a slight contribution towards a fuller knowledge of the subject, and may, I hope, lead those who are resident in the province to give it that thorough investigation which it deserves.

I first noticed something new in the tombs in the tract of country between Isàndrandàhy and Ambòsitra. Within two or three hours' journey from the latter place I observed that the upright stones placed near graves were not the rough undressed blocks or slabs common in Imèrina, but were finely dressed and squared and ornamented with carving. (In Imèrina, I may here remark, the Hova tombs consist of a vault made of large undressed slabs of blue granite rock, with stone shelves, upon which the dead are laid, tightly wrapped up in a number of native cloth *làmbas*, the outer ones of silk. The door is of stone, with pivot hinges, above and below, fitting into sockets; and the whole structure is usually finished with a square erection of dressed stonework, in two or three stages, often with a kind of headstone, on which, since the introduction of letters, is frequently cut the name and titles of the head of the family. When the corpse of a person of rank and position cannot be obtained for burial in the family tomb, as occasionally happens in war, a rough undressed slab of stone is erected as a burial memorial. These are often ten or twelve feet high, and are termed *ràtolàhy*, which means literally "male-stone"; and I have sometimes thought that this word, and the shape of the stone, may indicate some ancient connection with phallic worship.) On the evening of one of the days of my stay at Ambòsitra, I walked out with the Rev. T. Brockway, our L. M. S. missionary at that station, to the top of the rising ground on the western slope of which the town is principally built. Here there was an old *amòntana*¹ tree, and memorials to some of the early kings of the Bètsilèo. The chief of these was a piece of timber seven or eight inches square and about ten feet high,

¹ One of the finest trees of the interior, a species of *Ficus*.

having pieces of wood projecting from a little below the top, so as to form a kind of stage. Each face of the timber was elaborately carved with different patterns arranged in squares. Some of these were concentric circles, a large one in the centre, with smaller ones filling up the angles; others had a circle with a number of little bosses in them; others had a kind of leaf ornament; and in others parallel lines were arranged in different directions. The narrow spaces dividing these squares from each other had in some cases an ornament like the Norman chevron or zigzag, and in others, something similar to the Greek wave-like scroll. The whole erection with its ornamentation bore a strong resemblance to the old runic stones, or the memorial crosses in Ireland and parts of the Scottish Highlands. The north face of this memorial post was quite sharp and fresh, but the others were worn by the weather, and the carving was filled up with lichens. I was greatly interested with this carving, as being almost the first specimen I had seen of indigenous Malagasy art; and I greatly regretted having no appliances with me for taking a "rubbing" or a "squeeze." Not very far from this memorial there were some others, consisting of two pairs of posts, each with a lintel, like a gateway, except that the opening was filled up by a large flat upright stone. These posts were carved much in the same style as the single one just described, but were not so massive, and were more weathered. The tops of the posts were carved into a shape somewhat resembling a vase. I then remembered that two or three days before we had passed a newly set-up memorial stone carved in three large squares, with much the same kind of ornament as these posts had in wood.

I now regret still more not having obtained some sketch of this group of burial memorials, because, on visiting Ambòsitra three years ago, I found that the whole had been utterly swept away. The Hova governor had appropriated the site for his official residence and courtyard, and the picturesque tombs of the old Betsiléo chiefs and the fine trees had been destroyed to make way for a great brick building, raw and common-place, whose erection had been a heavy tax upon the unpaid service of the people.

On our journey from Ambòsitra to Fianàrantsòà, at about two hours' distance from the former place, we passed a tomb by the roadside with a carved wooden post similar to those at Ambòsitra. I got down from the palanquin, and examined it; some of the carving was similar to what I had already seen, but there were other graceful forms which were new, and some of the compartments were like the English Union Jack. But it was on the following day, when passing over the elevated line of road

between Zomà Nandihizana and Ambôhinàmboàrina, that I was most astonished and interested by the profusion with which these carved memorials were scattered along the roadside, as well as in all directions over the tract of country visible on either hand. Leaving an elevated valley—if one can so describe it—a long, nearly level hollow on high ground, with hills on either side not a mile apart, and gently curving round to the south-west,—we came out at last to an uninterrupted view, and in sight of a rounded green hill, about a quarter of a mile to the west of the road. This place is called Ikangàra, and has a few houses and a little church on the top. But between it and the road there was a large number of tombs and memorial posts, so my companion and I went to inspect them. They were well worth a visit, as in a small space there were grouped together many different kinds of monuments, with wood carving in great variety. Within a short distance were some forty or fifty tombs, and on examining them there appeared to be the following kinds:—

(1) The largest tombs—there were two of them—were of small flat stones, built in a square of some twenty to twenty-five feet, and about five feet high. But around them was a railing of carved posts and rails, those at each corner with the vase-shaped top already described; these were connected by a transverse rail, and this again was supported on each of the four sides by upright posts which finished under the rail. All the upright timbers were carved in patterns like those seen at Ambositra and on the road the previous day.

(2) Another kind of tomb was formed by a square structure of small flat stones, four or five feet high, and perhaps a dozen feet square; but on the top was a square enclosure of four carved posts with the vase-shaped heads, connected by lintels, and with an intermediate upright. This structure was about four feet square, by seven or eight feet high, and in the centre was a single carved post. (See Fig. 15.)

(3) A third kind of monument was a massive block of granite, from eight to ten feet high, and from eighteen inches to two feet square, with carved posts at the four corners and touching them. On the top these were connected by carved cross pieces, and upon these the skulls of the bullocks killed at the funeral of the person the monument commemorated were placed. Many of these horned skulls remained in their places.

(4) Another kind of memorial was a massive square post of wood, about twenty feet high, and fifteen inches square, carved on all four sides from top to bottom. There were four or five of these enormous posts here. In one case there was a pair of them, as if to form a kind of gateway; two or three were

split nearly all down their length by the action of the sun and weather.

(5) Still another kind was an oblong block of dressed granite, with an iron hoops round the top, in which were fixed a dozen or more pairs of slender iron horns. There were two of this kind of monument at this place, and we afterwards saw others on the road.

(6) Besides the foregoing there were numerous specimens of the smaller carved post such as we had already seen at Ambositra, with the vase-shaped head and a small open staging near the top, on which were fixed upright sharp-pointed pieces of wood. These were for placing the ox skulls upon. (See Fig. 8.)

It may be here noted that the humped and long-horned ox being the largest animal known in Madagascar, this animal, especially the bull, is very often used in native proverbs, royal speeches, songs, and circumcision observances as a symbol of power and authority, while the horn is frequently employed as an emblem of strength, much indeed as it was employed by the Hebrews and other Asiatics. Among the Sihànaka people lofty round poles are erected near their tombs, and at the top of these a forked branch of a tree is fixed, carved into a close resemblance of a pair of horns. And in the Tanàla, or forest region, the extremities of the gable timbers of the houses are fashioned into the form of horns. Among the Hova these are simply crossed, and slightly ornamented, small wooden figures of birds being often affixed to them, but they are still called *tàndro-tràno*, or "house horns." In royal proclamations the soldiers are styled "horns of the kingdom." There are many interesting customs among the Malagasy showing that the ox has retained the semi-sacred character it bears among many nations; in some tribes only the chiefs are allowed to kill the animal, evidently because the chief or king is also the high-priest of the tribe; while among other Malagasy peoples the ox is only killed at certain seasons which have some religious significance. The native kings are saluted as *òmbelàhy*, or "bulls"; and the same expression frequently occurs in forms of benediction at the circumcision and other festivities.

To return, however, to the interesting group of tombs at Ikangàra. Many of these memorials were sorely weathered and defaced, and others were falling, or had fallen, and were rotting away. But there was a great variety of pattern, many of them being well worth preserving and copying.

On the roadside, before we turned from the main path to look at Ikangàra, were a number of the more simple tombs, of a kind that seem peculiar to the Bètsilèo. They consist of a plain square, almost a cube, of thin undressed stones laid very

evenly. In some instances these had upright slabs at the corners and centres of the sides, so that they were not unlike Hova tombs, but the majority were of small stones only, laid horizontally. From the number of handsome tombs and memorials near this little town, we judged that it must have been an important place in former days. We stayed some considerable time examining this ancient cemetery, and then proceeded on our way southwards.

Our road lay along the top of a long ridge, with a valley on the west and an extensive plain on the east, with numerous hills, and old fortifications on their tops. Over the plain were dotted small villages and numberless green *vàla*, or homesteads of the Bètsilèo, enclosed in a circular and impenetrable fence of thorny mimosa or *tsiàfakòmby*, i.e., "impassable by cattle" (*Cæsalpinia sepiaria*, Roxb.). About a quarter of an hour after leaving Ikangàra, we came to an old fortification running along the crest of the ridge and called Ianjànonakèly; a low stone rampart extended for a hundred yards or more along the hill, and there were many tombs. Indeed we were struck by the number of tombs and carved monuments on the roadside all the way to Ambòhinàmboàrina. The most common form is the plain square tomb of thin, small, undressed stones, and the upright *vàtolàhy*, or block of granite, from eighteen inches to two feet square, and eight to ten feet high. While the *tsàngam-bàto* (i.e., "upright stones") in Imèrina are all of rough undressed slabs of blue rock, these in Bètsilèo are of fine-grained, hard white granite, in massive blocks, and dressed to a beautifully smooth face. They are often in couples, and in one instance there were two stones, with an elaborately carved post between them. But the combinations of the different kinds of memorial were very numerous: there was something new every few yards; and all over the plain, near every little cluster of houses, we could see these white memorial stones.

South of the Matsiatra river, and nearer Fianàrantsoà, I noticed that there were very few of the upright square memorial stones compared with what we saw the previous day, and that there were no carved wood pillars at all. All the tombs, which hereabouts were very numerous, were the plain square or cube of undressed flat stones. The majority of these, I was surprised to find, were hollow, many having trees—*hàsina*,¹ *fàno*,² and others—growing out of the middle, which has a circular opening, and overshadowing the whole tomb, a sight never seen in Imèrina. From this it was clear that the chamber in which the corpses are deposited does not project at all above the ground, as it does in Hova tombs; and I afterwards

¹ *Dracæna angustifolia*. ² An acacia-like tree, *Pintadenia chrystostachys*.

ascertained that this chamber is excavated at a considerable depth beneath the square pile of stones, which is therefore not a grave, but only marks the place of one far below the surface. I noticed also that there was in most cases a long low mound of earth extending from one side of the tomb to a distance of from thirty or forty to eighty feet and upwards. This, it appears, marks the line of a long tunnelled passage gradually descending from the surface to the deeply sunk burial chamber. Mr. Richardson says that some of the Bètsilèo tombs are "as much as sixty feet deep, and are approached by a gradually descending passage opening some forty or fifty feet distant from the burial chamber. The tombs of the rich are sometimes fifteen or sixteen feet square, and are quite on the surface of the ground; and the four walls and roof are formed of five immense stone slabs, which are brought from great distances, and involve almost incredible labour. I measured one slab of granite, which was more than eighteen feet long, ten feet wide, and nearly three feet thick in some parts. I was once in a tomb eighteen feet long, fourteen feet wide, and ten feet high, formed of five stones, in one of which, to the west, had been cut an opening, and a rude stone door, working in stone sockets, had been fixed there. The finest memorial stone I saw was almost circular, and was four feet in diameter and about twenty feet high above the ground. Sometimes these stones are covered with carved oxen and birds. The most honourable superstructure is a solid mass of masonry erected over the stone tombs just described. These are square in shape and about six feet high. A cornice is worked round the top, and on this are laid the skulls of all the oxen killed at the funeral, regularly arranged. I have seen one, now rapidly falling into decay, on which were no less than 500 such skulls! The most symmetrical I ever saw was a new tomb, on which, in the outer square, were arranged 108 skulls of oxen in most regular order, every other skull being that of an ox whose horns had grown downwards. There were also two other squares of skulls arranged behind this one. It was a strange sight to see so many skulls of oxen with the horns, arranged thus and bleaching in the sun."

All through the country south of the so-called "desert" or uninhabited region, near Ivòtovòrona, we were struck by the tattooing on the chest, neck, and arms of many of the people. In some cases the men had figures of oxen, and in others an ornament like a floriated Greek cross; while the women had a kind of tattooed collar, which looked like deep lace-work or vandyking on the neck and chest. But I have never seen tattooing on the faces of the people.

I regretted that, our journey being made chiefly for the

purpose of seeing districts further south than Bètsilèo, we were unable to visit some of the larger old Bètsilèo towns, such as Ifanjakàna, Nàndihizana, Ikálamavòny, and others, where I was told there is a great deal of the peculiar carving to be seen, not only in the tombs, but also in the dwelling houses and furniture. We did, however, see two specimens of this native art as used in building: first, just before entering the Tanàla country, and again, immediately on leaving the forest on our return home. The first example was at a village of forty houses called Iválokianja, about two hours south-east of Imàhazóny. Here we went into one of the houses in the village for our lunch; it was the largest house there, but was not so large as our tent (eleven feet square), and the walls were only five feet six inches high. The door was a small square aperture, one foot ten inches wide by two feet four inches high, and its threshold two feet nine inches from the ground. Close to it, at the end of the house, was another door or window, and opposite were two small openings about a foot and a half square. The hearth was opposite the door, and the bed-place in what is the window corner in Hova houses. In this house was the first example I had seen of decorative carving in Malagasy houses; the external faces of the main post supporting the roof being carved with a simple but effective ornament of squares and diagonals. There was also other ornamentation much resembling the English Union Jack. The gables were filled in with a neat platted work of split bamboo. The majority of the houses in this and most of the Bètsilèo villages are only about ten or eleven feet long by eight or nine feet wide, and the walls from three to five feet high. A stranger seeing many of these native houses for the first time would say that they had no doors, and only very small windows, for the doors are so small and high up that entering such a house is a gymnastic feat requiring considerable agility, and more amusing to an onlooker than pleasant to the performer. All ideas of dignity must be laid aside.

The other example we saw of carving used for house ornamentation was at a small cluster of half-a-dozen houses called Ifandriana, some three hours before reaching Isàndrandàhy, on the way from Ambòhimánga in the Tanàla. The three centre posts of the timber house in which we stayed were all covered with carving of much the same character as that used in the memorial posts already described, but it was not quite so well executed. The nearly square window shutters had each a circular ornament carved upon them, much like the conventional representations of the sun, with rays, proceeding from a centre (see Figs. 9 and 10). During a more recent visit to the Bètsilèo province, I had opportunities of seeing some other

interiors; and in these not only were the three posts of the house and the windows carved, but also the wood-work enclosing the fixed bedstead—quite a little room of itself—as well as other timber-work about the building. In a paper contributed by Mr. Shaw to the “Antanànarivo Annual” for 1878, he remarks:—“The most distinctive indigenous art of the Bètsilèo is the carving, which is noticed by everyone travelling in any part of the province. There is an endless variety of patterns, though a great number are formed by combinations of three or four simple designs, that appear, in some form or other, on nearly every house-post or door, which are highly ornamented.”

One of the most perfect examples of the carved memorial post we saw the same day, in the morning, at the picturesquely situated village of Ivòhitrambo. This place is perched like an eagle's nest on the summit of a lofty cone of rock, on the edge of the interior plateau, and overlooking the great forest, the country of the Tanàla tribes, above which it towers about 2,500 feet. This memorial was close to the village, and was very perfect, the carving very sharp, and the stage near the top, consisting of several pieces of wood crossing one another, in good preservation, with about thirty ox skulls and horns still in their places (see Fig. 9). I made a sketch of one face of the post and its carving, which, I regret to find, I have left with other papers and drawings at Antanànarivo.

It may be added that in many cases figures of oxen and men are carved in some of the panels or compartments of these memorial posts, but the ornament is chiefly conventional. The Bètsilèo name for these memorial pillars is *tèza* or *tèzan-kàzo*; the root *tèza* means “durability, anything firmly fixed,” and also, “fixed upright.”

In his little book entitled “Madagascar of To-day,” Mr. Shaw says: “Perhaps the most elaborately carved post I saw during my residence of eight years in the Bètsilèo was at a small village about a day's journey north-west of Fianàrantsoa. This was the central post of a high house belonging to one of the chiefs. It was twenty feet high and carved from top to bottom. Each of the four surfaces, about eighteen inches broad, was divided into sections by cross-cuts forming squares with the edge of the post. In each of these were different designs formed according to the individual tastes of the many men who were probably impressed into the service of the chief to perform the work. Some consisted of radiating triangles, whose apices met in the central point; some were filled with pairs of circles touching each other at the circumference; others were concentric circles, and the corners of the squares filled with smaller curves springing from the outermost circle;

other squares were filled with zigzag lines running parallel to each other, or running diagonally across the square, while others were rough imitations of birds, bullocks, crocodiles, &c."

Before leaving the subject of Bètsilèo art it may be added that gourds, fifes, tobacco boxes (a piece of finely-polished reed or bamboo), and other articles are often very tastefully ornamented with patterns incised on the smooth yellow surface, the lines being then filled in with black. These patterns consist of lines, zigzags, scrolls, and diaper grounds, often very artistically arranged.

As already remarked, my visit to the Bètsilèo in 1876, was too short and hasty to allow of a thorough examination of these interesting examples of indigenous art. And not thinking of meeting with such specimens of carving I had not prepared myself beforehand with any appliances for taking drawings or copying them in any way. But, as will be seen from the rubbings here exhibited, an article in the "Annual" for 1876, which I have largely reproduced in this paper, did, to some extent, have the effect. I desired in drawing the attention of some of my brother missionaries to the subject, and, especially in inducing Mr. Shaw to make a number of rubbings of the more characteristic specimens of the ornament employed. Still, these by no means convey a proper idea of the rich effect of many of these sculptured memorials, for hardly anything but photography and the autotype process could adequately reproduce the many varieties of elaborate carving that are to be found; but much might yet be done by careful measurements and sketches and enlarged photographs. Many of the finest specimens of carving in the memorial posts and tombs are being fast obliterated by the action of the weather, and if not secured within a few years, the patterns carved upon them will soon be past recovery. Indeed, when passing by Ikangàra three years ago, I found the interesting group of burial memorials already described fast disappearing. Some of those I had seen in 1876 were quite gone, either rotted away by the rain and damp, or fallen to the ground and half buried in *débris*, and the whole presenting a much less striking appearance than during my first visit twelve years previously. (Of course these remarks apply chiefly to those carvings which are out of doors; those in houses have a much greater chance of preservation, but even here the desire to have larger and more modern-fashioned dwellings, especially of sun-dried brick, will probably cause the destruction of many of these old-fashioned adornments.) Besides this, it is very probable that the incoming of ideas and fashions from foreigners will eventually lead to the discontinuance of this primitive style both of memorial and of

ornament, although I have more recently found that such carvings are still executed, and such memorial posts still set up by the people. (For example, here is a small piece of carved wood sent to me a few months ago by one of my old students, a native of Betsiléo, and stationed at a large village a few miles to the south-west of Ambositra.) Still, as examples of indigenous art, it is very desirable that they should be copied as soon as possible, and perhaps it might be practicable to secure a few examples of the best carved pieces of wood themselves, and have them carefully deposited in some place of safety for reference and preservation. Apart from their intrinsic interest, these carvings may prove of value in showing links of connection between the Betsiléo and some of the Malayan and Oceanic peoples, and thus aid us in understanding more clearly the race affinities of the people of Madagascar. Mr. Shaw observes, "It is a significant fact that the simple designs [of the Betsiléo carvings] are almost identical with the same species of ornamentation in Polynesia. On a carved hatchet handle from Mangaia (Hervey Islands) in my possession are some patterns precisely like those on the spoon handles represented in the accompanying diagram. The wooden and horn spoons and wooden bowls for rice are also remarkably well carved, of good shape, beautifully smooth, and gracefully ornamented."

I will add here a few remarks with regard to the rubbings made by Mr. Shaw which illustrate this paper:

And first, I would say that it is by no means easy, either with red chalk (with which some of them are done), or with heel-ball (which has been used for others), to get very satisfactory impressions, because the surface of the wood has generally not been planed, but, apparently, roughly chiselled to a far from smooth surface; besides which, the weather has, in the case of the older out-door work, still further roughened the face of the memorial posts and the shutters; and so it is often difficult to give perfectly the sharpness of the carvings. It should be remembered, too, that these rubbings are "negative" impressions, the carving which shows in the wood being that which is left *white* on the paper, while the projecting untouched portions are *black*, so that the exact effect of the carving cannot be given by a rubbing.

On carefully going through the set of rubbings here exhibited, they appear to me to very fairly represent the majority of the patterns to be found both on the memorial posts, and on the roof-posts, shutters, and other internal wood-work of the Betsiléo houses. There are, however, I think, still a few other patterns which are not given here, and probably these are, in some cases, too high up to be conveniently reached. It will be

seen that a great variety of effect is given by innumerable combinations of a few simple forms. Thus, we have circles of many kinds: with rays, with Maltese crosses, chiefly of eight arms, with concentric circles, with Catherine wheels, with spirals, and with inner and outer bands of chevrons, of small quarter circles, of triangles, of wavy lines, of herring-boning, of short transverse lines, of small dentils, and of the Union Jack pattern, while sometimes they have scrolls terminating in small circles bounding the outer lines. In some cases the rays are numerous and are each herring-boned; while half-circles are frequently employed very effectively, and occasionally we find a combination of almost all these forms on one shutter. A combination of small circles with lines arranged diagonally, so as to form a series of triangles, is a very characteristic pattern in these carvings. In a few instances there is a barrel-shaped panel filled up with small circles and the diagonal or Union Jack ornament in bands and rows (Fig. 14). The square panels or divisions on the posts are frequently not only carved with circles similar to those just described, although on a smaller scale, but the angles are filled with lesser circles, springing from their outer lines, and in some cases with independent circles, nearly as large as the central one. Another species of decoration is effected by a kind of hatching, or lines cut in the wood, and running in various directions—upright, horizontal, and diagonal—so as to form diamond-shaped, or square, or triangular patterns (Fig. 3). In some of these, in the centre is a small Greek cross, and then lines following this outline, one after another, the rest of the compartment being filled with a square pattern. In other cases an L-shaped figure is repeated all over the square; and in others again are concentric half-circles, or half-circles with a band of chevrons.

But perhaps the most favourite ornamentation of all, judging from the profusion with which it is employed, is what I have called the "Union Jack" pattern. This appears almost everywhere, forming transverse bands dividing the panels, upright edgings to the angles of the posts, portions of circles, &c., and is sometimes repeated all over the panel or compartment, so as to form an effective kind of diaper. This pattern, together with narrow bands of small triangles forming a kind of dog-tooth, and a simple narrow dentil, forms almost all the framework, so to speak, of the panelling or divisions of the face of the posts, dividing them from each other by a series of lines. A sort of floriated cross occurs more rarely, sometimes with the four arms of different lengths, *i.e.*, the two upright ones shorter than the transverse ones, and of exactly the same pattern as that used for tattooing the arms and chests of the

Bètsilèo men (Fig. 13). I have also noticed two other styles of pattern which are best understood by a glance at the rubbings (Figs. 4, 5).

I have been unable to ascertain whether there are any traditions among the Bètsilèo as to the origin of this peculiar style of ornamentation, or whether the different patterns employed have any religious or symbolic meaning.¹ Not having resided in the province, I have had no opportunity of making any inquiries of this sort, although many questions now suggest themselves as interesting. I hope that my brother missionaries stationed among the people will try and ascertain something more on these points.

It will be understood that even this collection, valuable as it is, cannot give an adequate idea of the size of some of these memorial posts, many of which, as already mentioned, are twenty feet high, and eighteen inches square in section, while those here represented in two of the rubbings are only about four feet high. It would indeed be a rather formidable task to take a complete copy of these largest memorials, and would require many appliances and assistants, as well as an amount of time such as missionaries can rarely give to pursuits outside their more immediate and special work. I trust, however, that the rubbings here exhibited will give some clear idea of these productions of the Bètsilèo, and will show the decided love of ornament which they manifest in their peculiar style of wood carving. And I greatly hope that some one will yet give more thorough attention to the subject, and will make a more complete collection of copies—measured drawings, rubbings or squeezes, and photographs—so that these interesting specimens of an indigenous native art may be fully described and figured before its most characteristic examples have passed away beyond recall.

Note on the Illustrations.—The sketches which are reproduced in *fac-simile* in the accompanying lithographs I have made, with two exceptions, from Mr. Shaw's rubbings; and I think they fairly represent the most characteristic styles of ornament used by the Bètsilèo in their wood carvings. Figs. 1, 3, 6, 7, and 13 are examples of panels on memorial posts, or on the wooden pillars of their houses; Figs. 9, 10, and I think 14, are shutter decorations; whilst Figs. 2, 4, 5, 11, and 12, show bands and borders dividing the larger panels. The drawing (Fig. 8) in the centre of

¹ In the discussion that followed the reading of this paper, one of the members expressed a strong opinion that these ornaments must have had originally some religious signification. He also pointed out the fact (which I had not myself noticed) that in all the circles the rays were thirteen in number, therefore probably bearing some meaning. Miss Buckland remarked that many of the patterns closely resembled those on articles from the Nicobar Islands.

one group is from a photograph, a stereoscopic view; and Fig. 15 is from a pencil sketch I made at Ikangara.

The paper was illustrated not only by a large number of rubbings, but also by photographs of Madagascar, and of the Malagasy; and by wood carving, gourds, spoons, Bètsilèo and Hova baskets and mats, charms, and *lumba* of silk, cotton, and *rofia* fibre, &c.

DISCUSSION.

Mr. BALFOUR said:—It would be interesting to know if any of the conventional native patterns exhibited can be traced to original realistic designs, or to quasi-ornamental patterns which still retain some symbolic meaning. In the light of modern researches one is more and more tempted to investigate, as far as possible, the past history of forms of ornament, with a view to tracing them back to their prototypes, whose application for decorative purposes may have been suggested in a variety of ways. Possibly an examination of a large number of examples of the more frequent patterns, and of forms apparently related to them, may reveal some interesting series of transitions, showing the evolution of the conventionalized, purely meaningless, though decorative forms. In seeking for the early stages of patterns it is, as a rule, desirable to examine more especially those which either are not symmetrical themselves or are disposed in unsymmetrical combinations.

Mr. SIBREE said he had not been able to ascertain whether the various styles of pattern in the carved memorials of the Bètsilèo had any symbolical or religious signification; and not having resided in that province he had been unable to get much information about them. Probably careful inquiry by those stationed among the people would elicit much more of interest in connection with them.

JUNE 23RD, 1891.

EDWARD B. TYLOR, Esq., D.C.L., F.R.S., *President, in the Chair.*

The Minutes of the last meeting were read and signed.

The following elections were announced:—

Dr. G. A. WILKEN, of the University of Leyden, as an Honorary Member.

Professor DMITRI ANUCHIN, of the Imperial University, Moscow, as a Corresponding Member.

Professor BSEVOLOD MILLER, of the Imperial University, Moscow, as a Corresponding Member.

FREDERICK JAMES, Esq., of the Museum, Maidstone, as an Ordinary Member.

The following presents were announced, and thanks voted to the respective donors :—

FOR THE LIBRARY.

From FRANCIS PARRY, Esq.—*Nombres Geográficos de México.* (With Atlas.) 4to. Mexico, 1885.

From the AUTHOR.—Second Report on the Prehistoric Remains from the Sandhills of the Coast of Ireland. By W. J. Knowles. 8vo. 1891. Plates.

From the BERLINER GESELLSCHAFT FÜR ANTHROPOLOGIE, ETHNOLOGIE, UND URGESICHTE.—*Gedächtnissfeier für Heinrich Schliemann.* 4to. Berlin, 1891.

From the PUBLISHERS.—*African Aphorisms.* By W. E. Taylor. With Preface by the Rev. W. S. Price. 8vo 1891. (S.P.C.K.)

From the GOVERNMENT OF PERAK.—*The Perak Government Gazette.* Vol. iv. No. 12.

From the KONINKLIJKE AKADEMIE VAN WETENSCHAPPEN (Amsterdam).—*Jaarboek.* 1890.

From the EDITOR.—*L'Anomalo.* Anno iii. N. 5.

— *Nature.* Vol. xliii. Nos. 1128, 1129.

— *Revue Scientifique.* Tome xlvii. Nos. 24, 25.

— *Science.* Nos. 434, 435.

From the SOCIETY OF ARTS.—Vol. xxxix. Nos. 2012, 2013.

From the SOCIÉTÉ D'ARCHÉOLOGIE DE BRUXELLES.—*Annales.* Tomes i-iv; v, liv. l.

From the SOCIÉTÉ IMPÉRIALE DES NATURALISTES DE MOSCOU.—*Bulletin,* 1890. No. 4.

From the YORKSHIRE PHILOSOPHICAL SOCIETY.—*Annual Report.* 1890.

Professor PRESTWICH read a paper "On the Primitive Characters of the Flint Implements of the Chalk Plateau of Kent, with reference to the question of their Glacial or Pre-Glacial Age."

Mr. DE BARRI CRAWSHAY and Mr. B. HARRISON contributed some notes on the implements exhibited.

Dr. J. EVANS, General PITT-RIVERS, Professor BOYD DAWKINS, Mr. J. ALLEN BROWN, and Dr. TYLOR took part in the discussion, and the Author replied.

On the PRIMITIVE CHARACTERS of the FLINT IMPLEMENTS of the CHALK PLATEAU of KENT, with reference to the Question of their Glacial or Pre-Glacial Age. By JOSEPH PRESTWICH, D.C.L., F.R.S., F.G.S., &c., with Notes by Messrs. B. HARRISON and DE BARRI CRAWSHAY.

[WITH PLATES XVIII TO XXI.]

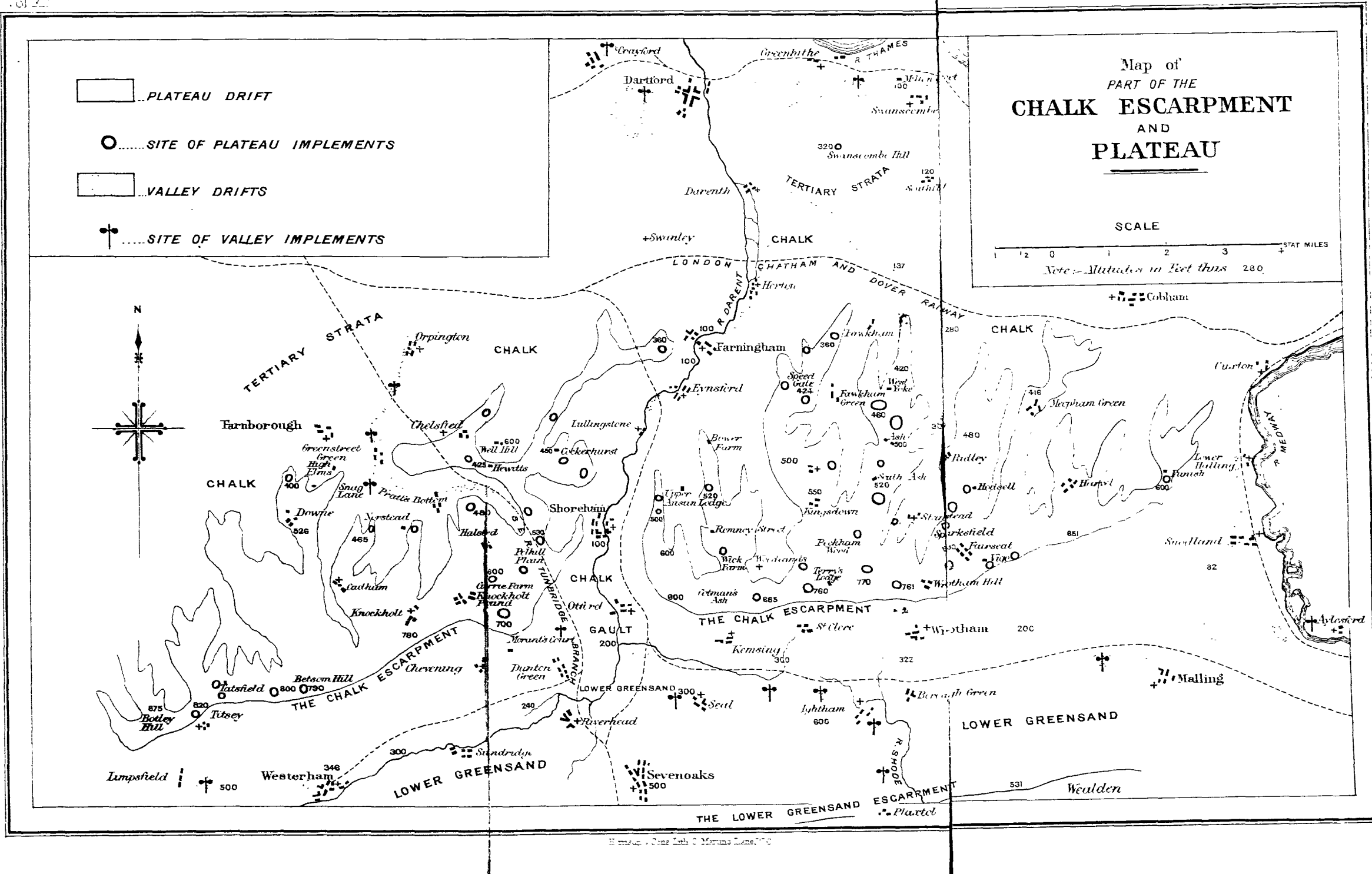
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1. *Position and Numbers of the Plateau Implements.*

It was in 1869 that Dr. John Evans, in company with the author and a party from High Elms, found on the Chalk Plateau at Currie Farm, near Halstead, a roughly made ovoid palæolithic flint implement.¹ The spot was 600 feet above the sea level, and far from any river valley, though at no great distance from the head of the dry upper valley of the Cray, and within one mile of the edge of the chalk escarpment. Although we made further search over the field on the surface of which it was discovered, we did not succeed in finding any other specimen.² There was nothing particular about the specimen, which might pass for a poor example of the ordinary river-valley type; nor was there anything in its surroundings to give definite clue to its geological age. A better formed implement was afterwards obtained in 1883, by Mr. B. Harrison from Park Gate, Lullingstone, on the plateau west of the Darent Valley, at the height of 400 feet, and a similar one was in 1886 found by the late Miss H. Waring at Cockerhurst, near Shoreham, at 430 feet. But it was not until Mr. Harrison began his active and persistent

¹ "Ancient Stone Implements," p. 531, and "Quart. Journ. Geol. Soc.," vol. xlv, p. 295. It is by mistake that the specimen is stated to have been found on the second visit. It was on the first.

² Since writing the above my friend the Rev. R. A. Bullen has found, near the same spot, another very similar specimen, which is figured (No. 6) in Plate III.





search on the Eastern Plateau in the summer of 1885, that their numbers and peculiar forms have become known. A total of 1,452¹ specimens have now been found. They occur scattered, at a large number of places, on the surface of the plateau at heights of from 400 to 800 feet, and extend to the crest of the escarpment. Nevertheless, these rude implements are at first not at all easy to find.

These plateau implements have now been traced for a distance of nearly 20 miles between the Medway and Caterham Valleys, and with a breadth of from two to four miles. It is on the high ground only that they occur, and though the heights actually vary considerably, this arises from the circumstance that the chalk plateau forms an inclined plane, having its highest pitch of 700 to 800 feet above the sea level, along the line of the chalk escarpment, and thence falling by a gradual incline northwards to the height of about 400 feet. (Fig. 1.)

The following is a list of the localities at which they have been found, with the height above the sea level, and the number of implements obtained at each; but fresh places are being constantly discovered.² In every instance, it is on the high levels of the places named that the implements are to be sought for. They are indicated, as far as possible, by dots placed in some relation to the church of the village, or of the farm-house named. (See Map, Plate XVIII.)

The Plateau east of the Darent Valley.

With the exception of the places marked with an asterisk (found by Mr. Crawshay) and † (by the Rev. R. Ashington Bullen, of Shoreham), all the localities on this plateau were discovered by Mr. B. Harrison.

¹ Mr. Harrison has upwards of 1,000 in his collection, and Mr. Crawshay nearly 400 in his.

² There is little doubt that further research will show them to have a much wider range over the Chalk Downs and at other corresponding levels. Within the last two or three years some thirty to forty worked flints of the plateau type and colour have been found by Mr. Hilton, of East Dean, at Friston, near Eastbourne, 350 feet above the sea level. Amongst them are specimens of the characteristic crescent-shaped scrapers. Mr. Crawshay has also found a few specimens at Stede Hill, above Lenham, on the Chalk Downs east of the Medway; and quite recently the Rev. R. A. Bullen has sent me a well-characterised beak-shaped implement from Blean Hill, near Canterbury. Similar flint implements have also been found by Mr. Worthington Smith on the hills near Dunstable, at heights of 596 and 760 feet in "positions away from existing river valleys." "Nature," for June, 1889, p. 151.

Name of Place.	Altitude.	Number of Specimens.
	feet.	
* Punish Farm	600	1
Hodsell Street	550	3
Sparksfield	520	95
Fairseat and Plot Farm	690	12
Wrotham Hill	760	15
Plaxdale Green, near Stansted	630	8
* Stanstead	633	19
Ash	490	235
South Ash	520	262
West Yoke Farm	460	222
Kingsdown	550	30
Terry's Lodge	770	50
Peckham Wood Corner	637	40
* Gabriel's Spring Wood and Speed Gate ...	450	3
Horton Wood (west of)	400	3
* Speed Plain and Gate	420	17
The Vigo	690	5
Birches Wood, St. Clere Hill	760	23
Cotman's Ash	665	4
Wick Farm	697	10
Bower Lane	520	88
† Preston Hill (Shoreham)	510	67
	—	65
Total ...	—	1,277

The Plateau west of the Darent Valley.

The places on this plateau are, with a few exceptions * by Mr. Harrison, the discovery of Mr. De B. Crawshaw.

Name of Place.	Altitude.	Number of Specimens.
	feet.	
* Cockerhurst (Shoreham)	450	3
* Park Gate (Lullingstone)	430	1
Snacklands Wood (west of)	530	40
Hewitt's Farm (Chelsfield)	470	3
Oldmen Wood "	430	1
* Polhill Plain ¹	447	22
Halstead-fields, north of Church	495	36
* Morant's Court Hill	700	10
Colegates	500	1
* Currie Farm	590	3
Norstead Hills ...	485	54
*† Botley Hill [†]	875	5
Betsom Hill (Westerham)	790	23
Titsey Hill (Limpfield)	864	11
Tatsfield Firs	820	3
Ivy Cottage (Tatsfield)....	790	13
Park Wood	780	1
Farthing Street (Downe)	400	6
Total	—	236

2. The Geological Question.

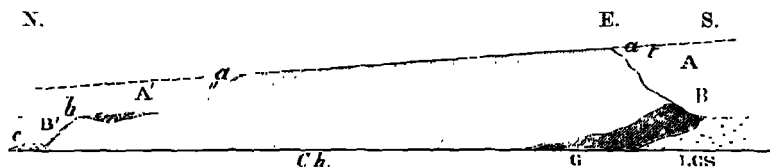
Upon the geological question relating to the age of the plateau drift it is not necessary to enlarge, as I have treated it in detail in two papers recently read before the Geological Society.² My object now is to enquire whether the character of the implements is in accordance with the early glacial or pre-glacial age, to which I would assign them.

I may, however, for the information of those members who are not acquainted with the geological argument, briefly give the facts on which the antiquity of the drift, with which the implements are associated is established, in a diagram which embodies the essential points. (Fig. 1.)

¹ Mr. Bullen has recently discovered another promising locality to the north of the London Road, not far from the Polhill Arms, and within half-a-mile from the field on Currie Farm.

² "Quart. Journ. Geol. Soc." for May, 1889, and for May, 1891.

Fig. 1.—Diagram showing the relative positions of the implement-bearing Drift on the Chalk Plateaus and of the Valley Drifts of Post-Glacial age.



a.—Red Clay-Drift, 5 to 20 feet thick, containing numerous unrolled chalk flints, and overlying here and there thin remnants of Lower Eocene and Pliocene strata. The rude flint implements are scattered over the surface of this ground.

b.—High-level Valley gravel of fluvial origin and Post-Glacial age, with palaeolithic flint implement and a few mammalian remains. This lies about 100 feet above the level of the Thames.

c.—Low-level Valley gravel and loam, with palaeolithic implements and numerous remains of large extinct mammalia. These slope down to the Thames level.

Ch.—Chalk. *G*, Upper Greensand and Gault. *LGS*.—Lower Greensand.

The chalk plateau rises from 400 to 800 feet above the sea-level, and is bounded north and south by the valleys *A' A*. These valleys have cut off abruptly, on both sides of the plateau, the drift *a* and the Pliocene beds *t*, which originally extended over the area now occupied by those valleys, as shown by the dotted lines. Spread over the surface of the red clay (*a*) is a scattering of peculiar brown-stained flints, together with fragments of chert and ragstone,¹ derived from the Lower Greensand strata, which form a range of hills four to five miles south of the chalk escarpment, *E*. But at the time when that *débris* was transported on to the chalk plateau, the valley *A* was still bridged over by the chalk and overlying strata *t*, which have since been removed by denudation. The plateau drift (*a*) dates therefore from a time subsequent to the pliocene period, but still when the beds of that age *t* had a wider range southward, and anterior to the glacial period, during which the valleys *A' A* were excavated. It is therefore of pre-glacial or early glacial age; and as the flint implements are closely associated with this plateau drift, and are limited to the area over which it extends, we are led to infer the pre-glacial or early glacial age of the men by whom they were fabricated.

The bed of the valleys *A' A* afterwards formed the channels of the rivers that deposited the gravel *b*, and it is in these high-level valley gravels, formed during the early stages of the post-glacial rivers, that the well-known palaeolithic flint implements of an advanced type—such as those of the valleys of the Thames and Somme—are found. As the rivers continued

¹ The Southern Drift of the Author (see "Quart. Journ. Geol. Soc.," vol. xli, p. 155).

to deepen their channels, the gravel beds of this first stage were cut through and left as terraces at various heights above the newer valleys B'B, while in the bed of these later valleys were deposited the gravels and loams *c* which constitute the low-level valley drifts of the last stages of the post-glacial rivers, and it is in these especially that the remains of the great extinct mammalia (*the mammoth, woolly rhinoceros, reindeer, &c.*) abound, associated with flint implements of later Man, though of types very similar to those of the high-level valley drift.

It will be obvious from the above, that the drift-beds *a*, with their associated implements, preceded those marked *b*, just as these latter preceded those of *c*. This establishes a *prima facie* presumption of the greater antiquity of the implements found on the chalk plateau—a presumption which is materially strengthened by the circumstance that the workmanship of the implements is in accordance with the great difference in geological age between the plateau and the valley drifts.

Nevertheless, though we may be warranted in drawing this inference from the facts as far as they are known to us, we yet need, as I have before explained ("Quart. Journ. Geol. Soc.," vol. xlvii, p. 288), further information as to the exact relation of the implements to the plateau drift. Owing to the absence of pits and rarity of sections, we have had for the greater part to depend on specimens found on the surface, or thrown up in shallow plough furrows or trenches, or on a few roadside cuttings, and although from the deep staining of the implements, and their occasional incrustations with iron oxide, we have reason to believe that they have been imbedded in a deposit beneath the surface, it is only in a few rare instances that they have actually been found at any depth. A fine specimen was found at South Ash in making a hole two feet deep for planting a tree, but as it was picked up on the thrown-out soil, its exact position beneath the surface remains of course uncertain. It was the same with the one obtained in a post-hole at Kingsdown. For two others we have, however, the personal testimony of Mr. Harrison. One he took out of a bank of the red-clay-with-flints on the side of a pond and at the depth of two and a half feet, and the other from a bed of "deep red clay," two feet in depth, at the Vigo.¹

The condition of the implements and their limitation to the "red clay" plateau, form, however, a strong argument in favour of the intimate relation of the one to the other, notwithstanding

¹ Mr. Bullen has just had a trench dug on the top of Preston Hill. It was nearly five feet deep, through surface soil (one foot); and the red-clay-with-flints in which, at a depth of three feet ten inches from the surface, he found an unworn white flint—apparently the broken point of a small implement (Oct., 1891).

the absence of definite sections. It is in any case clear from the occurrence of the implements on the highest summits of the chalk plateau and escarpment, that whatever may be the causes which led to their distribution, those causes must have been, unlike these affecting the valley drifts and implements, independent of the present topography of the district and of the system of river drainage as now established.

3. *Alternative Explanation of their Origin.*

Is it possible, however, to account for the presence of these flint implements in any other way than that of their being contemporary or nearly so with the plateau drift? For example, could these implements, like the neolithic implements which occur on the same ground, have been dropped on the surface where they are now found, at some later date? The answer to this is, that these neolithic implements show only weathering by exposure on the surface, and are found at all levels, whereas the plateau implements, besides their wear and colour, present all the physical characters due to having been *imbedded in a special drift, and are confined to a special area*. The two sorts, although found on the same ground, remain perfectly distinguishable. (For further observations on this point, see "Quart. Journ. Geol. Soc.," vol. xlvii, p. 133.)

Then again, is it not possible that similar rude specimens occur in the valley drifts, and have been overlooked owing to the prevalence of the better finished implements to which attention had been exclusively given. This, if we admit that rudeness of form alone is not a sufficient reason, is a fair argument. The ruder valley forms have not, however, been altogether overlooked. A large number of rude and badly finished specimens have been collected in the valley drifts, but they all belong to one set of types (*postea*, p. 255), and though I have seen and handled many hundreds of these, I question whether, with the exception of the *derived* specimens to be named presently, there were any like the ruder and most primitive of the plateau types. The distinction is as well marked as that between the ruder specimens of Roman pottery and rude early British pottery.

Boucher de Perthes collected everything in the Somme district, which showed any traces of workmanship, howsoever indistinct, or even of similitude, yet I do not remember that in his great collection there were specimens of the peculiar character of these plateau implements.¹ Nor had Mr. Harrison,

¹ I have one specimen given me by M. Boucher de Perthes, from near St. Riquier, five miles north-east of Abbeville, which may belong to this group. It is

during his rigorous examination of the Shode Valley, discovered any specimens in the valley drifts of the Ightham district to correspond with the group of the plateau implements. At my request, he has re-examined several of these localities, as well as the large pit at Aylesford in the Medway Valley, and the pits at Milton Street (Swanscombe) in the Thames Valley, with this special object in view. He reports to me that he finds no contemporary specimens of the plateau type, and very few derived specimens of that type either at Highfield, Court Lodge, Bayshaw or elsewhere in the valley drifts near Ightham. At Aylesford, he found one, and at Milton Street, none.

Mr. Crawshay has one derived specimen from Goodley Stock, one from Dry Hill, two from Seal, three from Chart Farm and Kilnfield, and one from Stonepits. His collection from Milton Street contains less than one per cent. of derived plateau specimens.¹

In the large collection from the Limpsfield high-level gravel formed by Mr. A. Montgomery Bell, there are none of the older specimens, but Mr. H. Lewis has sent me one of the double-curved scrapers (the depressed form), characteristic of the plateau group, which he found in the Limpsfield Common gravel pit; and Mr. Bell informs me that he has certainly seen and rejected some of the older rude specimens, owing to the absence of the bulb or percussion which he then considered essential. That a certain number of derived specimens should be found in the valley gravels is to be expected, if we bear in mind the extent of surface lost by the plateau during the excavation of the valleys which traverse and flank it on all sides, for while the chalk in these valleys was washed away and lost, the harder and heavier materials have been left behind amongst the general *débris* of the newer drift beds. The derived plateau specimens are easily distinguished, by their greater wear, distinct colour, and peculiar shapes, from the implements contemporary with these valley drifts.

I do not wish to assert that all the plateau implements are of so distinct a pattern that they can always be distinguished from the valley implements. Nor would I insist that their rudeness alone is a proof of their antiquity, for not only are there rude specimens in the valley drifts, but the plateau group includes a certain number of better finished valley types. The difference consists in the fact that the great majority of the plateau specimens are of this rude make and peculiar types,

said to have been found at a depth of four mètres, and evidently comes from the red clay drift, which there caps, as it does here, the higher chalk hills. It is four inches long by one and a half inches wide, rod-shaped, very roughly chipped all round and at ends, and has a white patina, to which some of the red clay yet adheres.

¹ Mr. Lewis has, however, found a rather larger proportion in the Swanscombe pits, and one still larger in the gravel at Southfleet.

while well or even moderately well-finished specimens are rare, and also in that they possess special physical and structural characters, in accordance with a presumed greater geological antiquity. The presence of a few forms in common does not invalidate the general evidence any more than does the circumstance of the implements in low-level valley drifts being scarcely distinguishable, except perhaps in the proportion of some forms, from those of the high-level gravels, notwithstanding the difference of position and age.

4. *Distinctive Characters of the Valley and Plateau Implements.*

But the special question which I wish to bring before you this evening, is whether, taken as a whole, the plateau implements exhibit distinct characters and types, such as would denote them to be the work of a more primitive and ruder race than those fabricated by palæolithic man of the valley-drift times. The chief features of the valley implements may briefly be stated as follows:—

The Valley Implements.—With respect to these, it is manifest that the great majority of the implements have been made from larger flints, either taken direct from the chalk, or else found lying on the surface or in the bed of streams. I have before cited the interesting case at Crayford, described by Mr. F. C. J. Spurrell¹ where at the foot of a submerged chalk cliff on the old Thames bank, he found beneath a depth of 20 to 30 feet of mammiliferous drift beds, the surface of a former strand strewn over with the flakes and chips of large flints, of which a layer is still exposed in the adjacent old cliff. The fragments are as sharp and fresh as those of a recent Norfolk flint-knapper's shop, and show as well-marked bulbs of percussion, and though they are scattered about in disorder, they often admit of being put together again in a manner to restore the form and substance of the original blocks. Other old workshops away from the chalk area, and therefore dependent upon flints from the surface, or from the bed of streams, have been found by Mr. Worthington Smith² at Stoke Newington, and by Mr. Allen Brown³ at Acton.

A few only of the valley implements are made from gravel-flints, or from the green-coated flints at the base of the Lower Tertiaries. The size of the implements varies generally from 3 to 6 or 7 inches in length, but some specimens attain a length

¹ "Quart. Journ. Geol. Soc.," vol. xxxvi, p. 544.

² "Journ. Anthropol. Inst.," vol. xiii, p. 357.

³ "Palæolithic Man in North-west Middlesex," pp. 56-60.

of 10 to 12 inches. They are in general but little worn, though there are exceptions to this rule. The workmanship of the implements often shows considerable skill, and some of the smaller lanceolate forms are chipped and finished with a neatness approaching to the Danish javelins or spear-heads of the Stone period. At the same time there is a considerable proportion present of rude and sometimes very rude specimens, but they all belong to the same types as the more finished specimens. Many of the implements were no doubt used in the hand, but a large and probably the greater number must have been fixed or tied to handles of wood or bone.

Sometimes the colour of the flint of which the implements are made is in no degree altered, but remains as black and fresh as originally. At other times, it is stained yellow or ochreous by the matrix in which it has been embedded, or else owing to a molecular change of the surface, it has assumed the white colour and glazed aspect of porcelain. The following are the principal forms of the valley implements:—

1. Narrow flakes with sharp untrimmed edges—for cutting.
2. Oval, leaf-shaped, and round flakes, worked on one side or at the edges—scrapers.
3. Pointed implements with the haft end formed by the natural surface of the flint—tools or weapons.
4. Pointed or lance-head implements, often very large; and worked entirely out of the flint—same as 3.
5. Spatula-shaped implements, generally all worked out of the flint, or with the natural flint left at one end as a haft—for same purposes as 3 and 4.
6. Flat ovoid implements worked all round.
7. Ovoid implements with a slight twist in centre.
8. Flints used as hammer stones.

Of these the pointed forms Nos. 3, 4, and 5, largely predominate, and next are the ovoid forms, Nos. 6 and 7.

The Plateau Implements.—The physical characters which on the other hand distinguish these implements are:—

1. They are almost all more or less stained, like the drifted flints with which they are associated, of a deep warm brown colour, which spreads alike over the natural and the worked surfaces, although in some cases it is lighter on the latter.
2. They also, like the drifted flints, generally show a considerable amount of wear, as though they had been a good deal rolled and knocked about, so that the worked edges are commonly rounded off and blunted.

This character combined with the last often renders the artificial work very obscure.

3. The trimming is also often very slight, and has generally been made on the edges of rude natural flints taken from an old flint drift. It is only in a very few instances that an implement has been entirely wrought out of a larger flint, whereas, as just mentioned, with the valley implements such is commonly the case. The trimming, slight though it may be, is to be recognised by its being at angles or in places incompatible with river-drift agencies, and such as could not have been produced by natural causes.
4. Besides the implements of definite patterns, there is a large, probably the larger, number, which though not the result of chance, show no special design. Amongst these are the natural flints which have been selected for use as hammer or trimming stones, the result being that the flint has become chipped at the ends or round the sides undesignedly, but still in a manner that could not have resulted from natural wear. In a similar way, some are roughened at the end like the large pebbles or balls used at a later neolithic period, exhibiting patches of rough abraded surface, the result of repeated blows.

The observer will soon learn to distinguish between a natural flint in which angles project in any direction, however they may otherwise simulate the artificial forms, and those flints which show an object to be attained, in however simple a way that object has been carried out.

But although the great majority (at least 95 per cent.) of the specimens are of rude primitive forms, there are some which might pass as indifferent valley drift specimens of the ovoid and pointed types, while a few large implements have been found almost equalling in workmanship and finish the best of the valley specimens. One specimen (mentioned at p. 251) from South Ash, in Mr. Harrison's possession, is most carefully fashioned. It is 6 inches long by $3\frac{1}{2}$ inches in width, and is of the thin flat spatula-shaped form, and of a bright yellow colour. Two others are large flat ovoids from the field off Bower Lane, whilst another, also from Bower Lane, has the top broken off, and is similar in shape to the Ash specimen, but is weathered white, as though it had not been entombed in a drift bed.

Two well-made implements of the sharp-pointed St. Acheul (Amiens) type have also been found—one white, is from Kingsdown, and the other, stained yellow, is from Ash. Neither of them are at all worn, and both show a slight patina.

It is not easy to account for the presence of these abnormal specimens. If contemporaneous with the others, we might assume that there were then some workmen more skilled than their neighbours in the fabrication of flint implements. But if so, how is it that they are not more numerous, and that there should be so great a difference between those and the other forms, or that there should be few or no intermediate forms? How also are we to account for the great difference in physical conditions? The rude specimens which preponderate so largely are of a nearly uniform brown colour, and are usually much worn; while the few rare finished specimens are sharp, show no wear, and are of lighter tints.

Again, we may suppose that the plateau heights were at the later palæolithic periods frequented by man of the valley drifts for the purpose of the chase or to supply some want, and that some of their implements were lost when in pursuit of game, or in felling trees, or grubbing up roots. But these are mere conjectures, and we must wait in the hope that some new sections will throw further light upon the geological question, and show with greater certainty the exact stratigraphical relation of these different types of implements.

Whilst also the more finished implements have all the appearance of having remained *in situ*, the rude implements would appear to have been carried down, with the southern drift, on to the plateau, from those Central Wealden uplands which I have estimated¹ might, in pre-glacial times before the denudation of the Weald, have formed a low mountain range 2,000 to 3,000 feet in height. If it should prove that the rude implements have been thus swept down from those uplands with the drift which evidently has come from that quarter—and we have found nothing to indicate that they were made on the spot where they are now found—it is possible that they may have to be relegated to a still earlier period than I have named. But that must be a question for the future. For the present I am concerned only to show that their extreme rudeness as a whole, points to a very primitive state of art, which is in accordance with the antiquity indicated by the known geological evidence.

5. Typical Forms of the Plateau Implements.

Unlike the valley implements, the plateau implements are, as a rule, made of the *fragments* of natural drift-flints, that were found scattered over the surface of the ground, or picked up in gravel beds and merely roughly trimmed. Sometimes the

¹ 'Quart. Journ. Geol. Soc.," vol. xlv, p. 169.

work is so slight as to be scarcely apparent; at others, it is sufficient to show a distinct design and object. It indicates the very infancy of the art, and probably the earliest efforts of man to fabricate his tools and weapons from other substances than wood or bone. That there was an object and design is manifest from the fact that they admit of being grouped according to certain patterns. These are very simple, but they answered to the wants of a primitive people.

With few exceptions, the implements are small, from 2 to 5 inches in length, and mostly such as could have been used in the hand and in the hand only. There is, with the exceptions before named, an almost entire absence of the large massive spear-head forms of the valley drifts, and a large preponderance of forms adapted for chipping, hammering, and scraping. With these are some implements that could not have been used in the hand, but they are few and rude. The difference between the plateau and the valley implements is as great or greater than between the latter and the neolithic implements. Though the work on the plateau implements is often so slight as scarcely to be recognisable, even modern savage work, such as exhibited for example by the stone implements of the Australian natives, show, when divested of their mounting, an amount of work no greater or more distinct, than do these early palæolithic specimens.

Some persons may be disposed to look upon the slight and rude work which these flints have received as the result only of the abrasion and knocking about caused by collision during the transport of the drift. This belief prevailed for a time even in the case of the comparatively well-fashioned valley implements. A little practice, and comparison with natural drift flints, will show the difference, notwithstanding the, at first, unpromising appearance of these early specimens of man's handicraft. It is as such, and from their being the earliest such work with which we are acquainted, that they are of so great interest, for they give us some slight insight into the occupation and surroundings of the race by whom they were used. A main object their owners would seem to have had in view, was the trimming of flints to supply them with implements adapted to the breaking of bones for the sake of the marrow, scraping skins, and round bodies such as bones or sticks, for use as simple tools or poles. From the scarcity of the large massive implements of the pointed and adze type, so common in the valley drifts, it would seem as though offensive and defensive weapons of this class had not been so much needed, whether from the rarity of the large mammalia so common later on in the low-level valley drifts or from the habits and character of those early people. It would be interesting to institute a careful comparison of these

rude implements with the stone implements of different modern savages, to ascertain what analogy exists, or whether they do not point to a different state of things.

In order to form some estimate of the proportional numbers and character of the type specimens, I have carefully collated the large collections of Messrs. Harrison and De B. Crawshay, which they kindly placed at my disposal. This, and a comparison of them with the implements from the valley drifts in my own and other collections, lead me to adopt the following grouping of the main forms typical of the plateau drift. Some of the forms pass, however, so insensibly into others, as, for instance, the crescent-shaped scraper into the beak-shaped implement, or the double-curve scraper into a pointed implement—that it is difficult to draw the line between them or to say whether more or fewer divisions should not be made. Mr. Harrison has adopted a different grouping, based rather more on their use, which is given in his notes.

The greater number of the implements, no doubt, are so rude that probably few of us would agree upon a general classification. On the other hand some types are peculiar and very distinct, while a few are common to the later valley drifts, such as the pointed St. Acheul and the ovoid Abbeville types; but with few exceptions all the others are of more simple types, and have a stamp of their own, and most of them seem confined to this period. They may, for general purposes, be divided into three groups. The first consisting of those in which the natural flint has been used with little modification, and in which the original shape of the stone has determined the ultimate form. In the second the natural flints were equally used, but some object is more apparent in adapting them to a common pattern and special purpose. In the third, the implement or tool has been worked more or less entirely out of the flint with a definite object in view, as is the case with the later palæolithic implements.

The first group includes—

1. Fragments of thin flat pieces of flints or natural flakes, with the sides chipped and notched and sometimes brought to a rude point. No definite shape (Figs. 1, 2, 3, 4, Plate XIX).
2. Split flint pebbles from tertiary strata; chipped round the edges for cutting or scraping (Figs. 5, 6, Plate XIX).
3. Larger flints that fit the hand and could be used with a little dressing as trimming and hammer-stones. These show the notches and marks, the result of blows given by use, and may have served to shape other flints, or to break bones or other hard substances (Figs. 7, 8, 9, Plate XIX).

The above constitute a very large proportion of the plateau implements. The second group is also very numerous, and includes a greater variety of more definite forms, especially scrapers of various patterns, such as—

4. Ordinary scrapers, formed out of natural flakes or flat pieces of flint trimmed at the edges (Fig. 1, Plate XX).
5. Knob-headed and shoe-shaped scrapers, formed from a rough flint, flat on one side and retaining the outer rough surface on the other, and trimmed at one end (Figs. 2, 3, Plate XX).
6. Massive thick scrapers, flat on one side and trimmed round one or two edges (Fig. 3, Plate XX).
7. Square-headed or chisel-shaped scrapers.
8. Crescent-shaped scrapers. These are generally small and adapted to scrape a round body such as a bone or a stick.¹ This is a very characteristic form (Figs. 4, 5, Plate XX).
9. Double scrapers. These seem intended for the same object, but have two scraping edges with an intervening point. This is another characteristic form (Figs. 7 and 8 are the ordinary forms; Figs. 6 and 9 (pebble-formed) are depressed forms; Plate XX).
10. Double scrapers in the form of an hour-glass. These are generally formed out of a thin flat natural flint, and are not common.
11. Beak-shaped implements which may possibly have been used as scrapers or as picks. These also are characteristic (Figs. 10, 11, Plate XX).
12. Crook-shaped implements, rare (Fig. 12, Plate XX).

The third group includes forms common in the valley drifts but comparatively rare among the plateau implements, and comprises—

13. Plain flakes, showing the bulb of percussion, used for cutting purposes, and so common in the valley drifts, but rare here (Fig. 1, Plate XXI).
14. Broad flakes, trimmed round the edges (Fig. 2, Plate XXI).
15. Ovoid implements of the same pattern as those common at Abbeville; but the smaller ovoid with a twist in the centre, so common in the valley gravels and in the Shode Valley, is wanting (Figs. 4, 5, 6, Plate XXI).
16. Pointed implements of the spear and lance-head pattern (a St. Acheul type). These are small compared with those in the valley gravels (Figs. 8, 9, Plate XXI).
17. The same with a slight curve at point (Fig. 7, Plate XXI).

¹ These resemble in shape an instrument termed a "drawshave," used in Kent for shaving hop-poles.

Besides these there are others of which only single or few specimens have been found. Amongst them are flints trimmed round, which may have been used as fling-stones; others are rod-shaped and short; one is crook-shaped (Fig. 12, Plate XX); and a few are drill-shaped (Fig. 12, Plate XXI); another forms a triangular point (Fig. 3, Plate XXI)

The relative proportion in which those groups occur may be approximately estimated at—

Slightly worked flints of the 1st group, 40 per cent.				
Rude implements	"	2nd	"	54
Implements of later types	"	3rd	"	6

It is probable, however, that the 1st group is underestimated, as so many of the specimens were not considered worth keeping, and have been thrown away. The greater number of the 2nd group consist of the various forms of scrapers.

No estimate has been made of the proportions in which the different types of the later palæolithic implements occur in the valley drifts; but speaking from general knowledge, I should say that not less than one-half consists of the different forms of the pointed and ovoid types, and probably one quarter of the different forms of flakes.

Looking at the very distinctive features of the plateau implements, such as their rudeness of make, choice of material, depth of wear and staining, peculiarity of form—taken in conjunction with the extreme rarity of the valley forms—constitute characters so essentially different from those which typify the latter implements, that by those characters alone they might be attributed to a more primitive race of men; and as this view accords with the geological evidence which shows that the drift beds on the chalk plateau, with which the implements are associated, are older than the valley drifts, I do not see how we are to avoid the conclusion, that not only was the plateau race not contemporary with the valley men, but also that the former belonged to a period considerably anterior to the latter—either an early glacial or a pre-glacial period.

I have asked Mr. B. Harrison and Mr. De B. Crawshay to add a few notes respecting the conditions under which they find the plateau implements, and especially with regard to their experience in the valley drifts bearing upon the question of community of forms.

6.—*Explanation of Plates.*

The numbers in brackets refer to the numbers of the specimens in the collection of Mr. Harrison. C. stands for those in Mr. Crawshay's collection, and B. for those of Mr. Bullen.

Plate XIX. First Group.

Fig.				
1	(384) South Ash	} Natural flints, very slightly trimmed at the edges.
2	(84) Ash	..	..
3	(427) West Yoke	..	..
4	(264) S. Ash	..	..
5	(155) Ash	} Split pebbles, trimmed at the edges.
6	(164) Ash	..	..
7	(119) Sparksfield	} Hammer and trimming stones.
8	(87) Kingsdown	..	..
9	(347) Ash	..	..

Plate XX. Second Group.

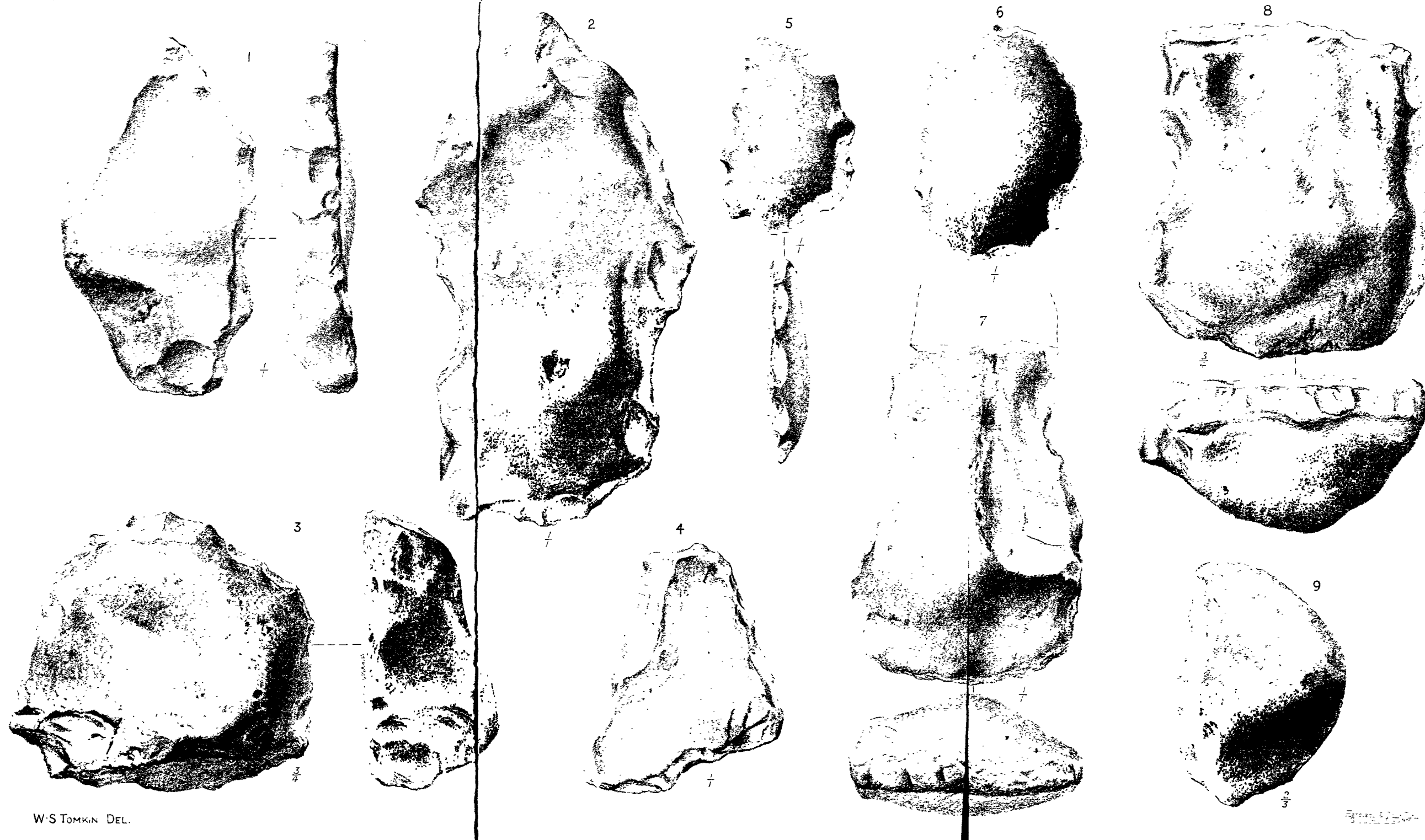
1	(355) Ash	..	..	Circular scrapers.
2	(215) South Ash	..	..	Knob-shaped scrapers.
3	(397) South Ash	..	..	Shoe-shaped scrapers.
4	(72) Birches near St. Clere	..	..	} Crescent-shaped scrapers.
5	(425) South Ash	..	..
6	(B.) Polhill Plain	..	..	} Double scrapers, Nos. 7 and 8 the long forms; Nos. 6, 9, depressed forms.
7	(416) Ash	..	..
8	(93) Ash	..	..
9	(154) Ash	..	..
10	(77) South Ash	..	..	} Beak-shaped implements.
11	(564) South Ash	..	..
12	(512) South Ash	..	..	Crook-shaped implement.

Plate XXI. Third Group (10, 11, 12 are out of place).

1	(1206) Ash	..	..	Broad flake leaf-shaped.
2	(458) Ash	..	..	Trimmed flake, large.
3	(C.) Ivy Cottage	..	..	Pointed triangular flake.
4	(556) Ash	..	..	Thin ovoid
5	(565) Ash Plain	..	..	Small ovoid
6	(B.) Currie Farm	..	..	Large ovoid
7	(594) Ash Plain	..	..	Small pointed, curved at end.
8	(47) Peckham Wood	..	..	Small pointed
9	(537) West Yoke	..	..	Large pointed
10	(1203) South Ash	..	..	Rude scrapers.
11	(1204) West Yoke	..	..	Trimmed triangular flake.
12	(1205) Ash Plain	..	..	Drill-shaped tools.

Plate XVIII.

Map of the district showing the extent and range of the plateau drift, and the position of the places where the implements have been found. The numbers give the height of the post above the sea-level.

















On certain RUDE IMPLEMENTS from the NORTH DOWNS.

By B. HARRISON, Esq.

PROFESSOR PRESTWICH having suggested I should make some remarks on the series of rude implements from the chalk plateau, I will briefly do so.

For many years I have been a diligent and successful hunter of palæolithic implements in the Shode Valley around my home at Ightham, and being familiar with the older forms, I was much impressed with the Currie Wood specimen when seen in Dr. Evans' collection in 1883.

Having made many excursions across the Cray Basin from Holwood, by Down Cudham and Currie Wood, I was well acquainted with the locality, and the question was put to myself, why should not similar specimens be found on the chalk plateau above Ightham? which to me seemed to present similar features.

For this purpose I instituted a rigorous search on the capping of Tertiaries lying just north of Ash Church.

Success, however, did not attend my first efforts, and it was not until the 19th of November, 1885, that a rich brown ochreous implement was secured.

This seemed to me the equivalent of the Currie Wood find, and somewhat like it, and I forwarded it to Dr. Evans, who in a few days replied with the comforting and encouraging remark: "The specimen you sent me from Ash much resembles in character and material the Currie Wood implement."

I was also encouraged to persevere by Professor Prestwich, to whom I sent all my successive finds, and advised with me as to the grounds to search.

This stimulated me to continue the work, but as the locality is distant about six miles, and my time is much occupied, a passing glance only could be bestowed for some months.

However, on each occasion on which I visited it, some relic of palæolithic age was secured, though I must own they were of so fragmentary and rude a character it needed the trained eye of a specialist to refigure.

On my submitting these fragments to Dr. Evans previous to the Ightham paper being given by Professor Prestwich, all were accepted, and I felt very desirous to thoroughly and rigorously search the area inch by inch.

Some time elapsed ere this could be done, as one part of the coveted area was a mass of weeds, and the next patch in corn;

but as soon as available for search, a day was devoted to the few acres, and about a dozen implements found.

Being much impressed with some rudely worked ochreous flints thus secured, I was prompted to search diligently on a patch of deep-stained much worn ochreous gravel lying by South Ash Farm, with which I had been familiar for many years.

On this spread stones apparently bearing work had been noticed, and eventually it dawned upon my mind that these rude and misshapen flints might possibly represent an earlier layer of palæolithic life—or at least might be rude field tools, which had hitherto been slighted and overlooked by those workers who had only sought for more highly finished specimens.

Feeling confident, I kept on with a determination to prove this point if possible.

Many and frequent visits were made to obtain specimens, and so many were acquired that I felt desirous to extend my knowledge of the area, and for this purpose traced from near the escarpment to a field near West Yoke, patches of deep-stained ochreous flint.

Similar observations were made by tracing along the ridge from Bower Farm, Eynesford, to Romney Street, and here, too, I was fortunate, many of the rude flints being found, and implements of the accepted types, in association with a spread of deep ochreous flint.

This led to a complete survey of the district, so that the chalk plateau was rigorously searched and many new localities added. I may mention those positions on each of which rude specimens have been found:—Terry's Lodge, Peckham Wood, Ash, South Ash (two patches), West Yoke, Sparks Field, Kingsdown, Cotman's Ash, Wrotham Hill, The Vigo, Birches, Wick Farm, and Bower Lane on the east of the Darent. Morant's Court Hill, Polhill Plain, the bed of coarse gravel lying above Eynesford on the west, and more recently on Telegraph Hill, Swanscombe.

Most of these implements have been found on the surface, with a few exceptions, which are laid out separately for inspection.

The first was thrown out from a post hole on the Kingsdown Plain, another from a hole dug two feet deep in which to plant damson trees at Parsonage Farm, the third from a pond bank deep down at Ash, and the fourth from a spread of deep red clay at The Vigo.

The West Yoke and South Ash patches, on which I first worked with a will, proved remarkably prolific, yielding both the rude and the accepted types of implements.

One from the former locality is deserving of careful attention.

It is of the spear-head type, of a deep red colour, and the angles of work so much worn it seems to have been derived from some former resting-place and to have suffered in transport.

The accumulation of so many of these rude examples impressed me.

Though many may possibly be classed as merely field tools "picked and used for chopping and hammering in the same way as one sometimes picks up and uses a pebble now-a-days," still there are scores of others evidently selected and fashioned in such a way that I felt justified in separating them into groups. Feeling confident that they do bear the impress of man, and possibly represent his first essays in handiwork (certainly in the Thames Basin), I have classified them as represented in the accompanying sheet:—

Provisionally I have them grouped thus:—

1. Crook point tool, Fig. 10, Plate XX.
2. Single curve scraper, Fig. 1, Plate XIX.
3. Double curved scraper, Fig. 8, Plate XX.
4. Combination tool, Fig. 2, Plate XIX.
5. Split pebble group, with work on side, Fig. 5, Plate XIX.
6. Semi-circular tool, Fig. 3, Plate XIX.
7. Drawshave or hollow scraper, Figs. 4, 5, Plate XX.
8. Tool with work all round, Fig. 4, Plate XIX.

1. *Crook point*.—The crook point is common to all patches, and stones were so selected that but a very little manipulation served to make an effective tool. No. 1 of this group was found long since and treasured. From the patina upon it I felt confident it was of palæolithic age, but no others of a like shape were lighted on for many months.

A specialist to whom it was shown was much impressed with its peculiar shape, and said it might have been used as a field tool and cast aside, but the finding of many more convinced me that a selection as to shape had been made, and it had been used for some special purpose.

2. *Single curve scraper or pointed tool*.—These evidently were common tools, as so many of this form are to be found, some very small and others of a much larger size, but as a rule trimmed on one side only.

In some instances these are so worked that a point may have been the desired end, but the majority seem to me so operated upon as if for the purpose of a single side-scraper.

3. *Double curved scrapers*.—Many of this form are found and seem to have been a handy useful tool, possibly used in scraping round surfaces.

Several indicate long-continued use from the wear, and may have been prized tools.

4. *Combination tools*.—So named from the fact that some three tools are combined in one.

The point for a definite use, the hollow scraper or drawshave, whilst the butt end is so trimmed as to form a broad end scraper.

The stones so shaped evidently were selected, and by thinking it out our early stone-workers so operated on the flint that a very handy tool was secured, or I may say three tools in one.

5. *Split pebble group, with work on one side*.—Of these many examples are shown. At first doubt existed, and I felt reluctant to place them in evidence, but many careful observations and the finding some on each patch seemed to justify the group being removed from the suspense account and placed as a distinct class.

I feel confident from my later observations that split pebbles had been sought, for and when found, by trimming on one side, useful tools for cutting or chipping were secured.

6. *Semi-circular*.—These are not quite so common, but enough were found to warrant me in believing that flints of this shape had been selected, and all being worked in a definite manner, may have had some special use.

7. *Drawshaves or hollow scrapers*.—This group seem to be the most common of all, found everywhere and abundant in every patch.

Some much worn by use and possibly highly prized tools; others as if only worked up to supply the need of the time and perhaps cast away and discarded. Still they are so numerous one cannot but look upon them as ordinary handy tools and useful for various purposes.

8. *Tools with work all round*.—These tools bearing work on all sides are perhaps more convincing to sceptics than many preceding groups, and it will be seen strikingly resemble each other in form.

I may add that those more convincing examples were not immediately found on my instituting a regular search, but the ordinary rude choppers were first observed many years since, but the work was so rude and indefinite it was only by carefully amassing scores of similar examples that one felt justified in putting in evidence.

These rude choppers are not grouped, as their form presents such infinite variety, but the work upon the sharper edge is sufficient to warrant the feeling that a human purpose is visible in the working.

In completing this work each specimen has been carefully examined by a hand lens before being sketched in my catalogue,

and though hundreds of others bearing some work are in my possession, care has been taken to include only those that may be truly deemed to have been worked intentionally and for a definite purpose.

The total number of these rude examples of man's handiwork sketched and catalogued exceeds 600.

If these are accepted as rude beginnings and showing a human purpose in them, the striving for something better which in due time followed, then I am content, and I beg to lay before the Institute the results of many years' observations and the harvest of later years' careful and persistent search.

NOTES by DE BARRI CRAWSHAY, Esq.

PROFESSOR PRESTWICH has asked me to write a few notes as to the work that I have done upon the Western Chalk Plateau comprised in his paper. There remains but little for me to say, but at his request I append a few details of the places and their productions, that you may have an accurate total to date of the large volume of evidence of the earliest traces of man in Britain.¹

List of Specimens from the Chalk Plateau West to June 1st, 1891 *"Crawshay Collection."*

Date of Discovery.	Name of Locality.	O.D. Level.	Various Implements.	Scraper flakes.	Simple flakes.	Total.
15/1/91	Botley Hill	875	5	....	....	5
28/4/90	Titsey Hill	864	11	....	....	11
15.1.91	Tatsfield Firs ...	820	3	....	....	3
15/1/91	Park Wood	780	1	....	....	1
29/10/89	Ivy Cottage	790	13	....	....	13
1/4/89	Betsoms Hill	750-790	21	2	....	23
1/4/89	Morants Hill	700	1	....	....	1
15/3/89	Norstead	485	51	1	1	53
15/3/89	Norstead, East ...	475	....	....	1	1
12/11/88	Halstead	495	19	2	15	36
15/3/90	Hewetts	475	2	1	....	3
25/4/91	Colegates	500	1	....	....	1
9/7/89	Jerkins Wood	530	35	2	3	40
15.3.89	Farthing Street ...	400	5	....	1	6
27.6.90	Oldwan Wood	430	1	....	....	1
			169	8	21	198

¹ I would separate palæolithic implements into two divisions, the usual term, "palæoliths," seeming to me insufficient, venturing upon a new word "palæolith," to designate the ruder and less uniformly shaped form of implement, as compared to the implement which has been flaked as is usual (referred to on

Halstead, 12/11/88, is thus the first discovery after Dr. John Evans' Currie Wood specimen of 1869, and the "key-note" to all my further finds on the west plateau.

I would say from my operations, which have been conducted entirely on the surface, that the implements lie in the scattered remains of former gravel beds in and upon the red clay with flints. In due time I hope to excavate, having been accorded permission in almost all cases, and we then shall be able to prove to a certainty the character of the deposits. In two sections I made at Bower Lane, I found a bed of mottled clay (Reading Beds), under a thin bed of the red clay with flints.

Another weighty piece of evidence of their extreme antiquity is, that among all these plateau specimens are none of the ordinary valley types, at least so far as my experience goes. At the levels below 400 feet the form becomes far more highly finished and evidences a great advance in the intellect of the beings then in occupation. In taking this evidence the reverse way, I find that on examination of my collection of over 200 specimens of implements and scrapers from the 100 feet level around Swanscombe, Kent, I have but one, which I produce, which is a plateau specimen undoubtedly derived. This gives but half per cent. proportion. Mr. Lewis has found a few also here.

I have always made specially careful search for all these ochreous flints in the low level gravels, and have rarely found one at all, comparatively speaking. From the 117 feet mark near Southfleet Station, I have two or three apparently derived ochreous flakes, which I exhibit, and as on the top of Swanscombe Hill at 300, there is a patch of the ochreous gravel; this gives them additional weight. Mr. Lewis also has found a few here and I call your attention to them. Mr. F. C. J. Spurrell, of Belvidere, has found an ochreous plateau type implement at the top of the adjoining hill nearer to Stone.

On reviewing the whole of these later discoveries of man's early implements, I think it must be a patent fact to all that

p. 3 of Prof. Prestwich's paper) over all or a portion of its flatter surfaces in the specimens of the lower levels, and which are almost absent in the higher localities above the levels of Ash and Bower Lane (500' and 520'). I personally have found none, but Mr. Harrison has one for Terrys 770'. I do not suggest that they are of a separate *neo-liths*, but I only coin and use the *these most* interesting rude forms that are in many cases only just removed from "a piece of stone," which to the uninitiated eye many acknowledged ones also appear. I also think that we can trace a difference in these two sections roughly thus: the palæolith was shaped *before* using. These ruder forms, I think, were largely shaped *by* the use to which the natural stone was subjected, and taking them as a group they are amply evident of earlier and less intellect than what we used to find till we worked the highest levels on the chalk plateau.

these plateau finds are of an order and character that betokens less intelligence in the working of flint; for even if we take those that are flaked and worked all over, they are, excepting a very few, extremely rude, and much like the work of uneducated workmen in their art.

To complete my remarks, I may say that the additional evidence of discovering one good specimen of the plateau type, as well as two or three poorer ones in a search for them that I made on the beach at Herne Bay, is most interesting and instructive in the history of these ancient works of man, proving their descent in decreasing numbers as they arrive at the lowest levels.

In illustration of Professor Prestwich's paper, I exhibit a number of specimens from the various localities.

List of Specimens from Chalk Pateau East to June 1st, 1891.
"Crawshay Collection."

Date of Discovery.	Name of Locality.	O.D. Level.	Various Implements.	Scraper Flakes.	Simple Flakes.	Total.
....	Stanstead	630	8	....	....	8
....	South Ash	520	2	....	....	2
....	Ash (Church)	500	11	1	13	25
....	West Yoke	467	31	1	....	32
23/6/88	Punish	600	....	....	1	1
....	Bower Lane....	520	26	13	40	79
4/12/90	Gabrielspring Wood	450	3	....	....	3
17/2/91	Speed Plain....	421	4	....	2	6
17/2/91	Speed Gate	420	11	....	....	11
20/1/88	Horton Wood	400	....	2	1	3
17/2/91	Grove Wood	390	1	....	....	1
13/8/89	Fawkham	360	7	....	....	7
			104	17	57	178

The localities undated were found by Mr. Harrison and visited afterwards by me. Those found at Norsted on the west,

and West Yoke on the east plateau, are so alike in the specimens that were they mixed and unnamed they would be indistinguishable. Their respective levels are but eighteen feet apart.

*List of "derived" Plateau Specimens found in the Valley Drifts.
"Crawshay Collection."*

West Section, South of Escarpment.

Date of Discovery.	Name of Locality.	O.D. Level.	Various Implements.	Scraper Flakes.	Simple Flakes	Total.
4/8/88	Goodley Stock	416	1	....	....	1
....	Ridlands	490	1	....	....	1
7/3/89	Sundridge Mount	400	1	....	....	1
7/3/89	Dry Hill	400	....	....	1	1
			3	....	1	4

East Section, South of Escarpment.

17/12/90	Ashford, south of S.E.R.	160	3	....	....	3 ¹
28/1/91	Greenway Court	380	1	....	1	2
28/1/91	Hollingbourne	250	2	....	....	2
....	Barning Heath	264	1	....	....	1
....	Dark Hill (Ightham)	280	1	....	....	1
....	Chart Farm and Kiln Field	400-450	3	....	....	3
....	Stonepits	400	1	....	....	1
....	Seal	290-320	2	....	....	2

East Section, North of the red clay with Flints.

22/2/88	Southfleet Station	117	....	....	4	4
....	Milton Street	100	1	....	....	1
....	Herne Bay	{ On the beach }	5	....	....	5
			20	....	5	25

¹ In a 3' deep pit.

DISCUSSION.

Mr. EVANS congratulated the author on his being able to record so large a number of new localities in which palæolithic implements have been discovered. The geological features of the case appeared to him very remarkable, and such as to justify a very great antiquity being assigned to the plateau-beds. In most instances implements more or less rude have been found, which are of recognised palæolithic types. With regard to nearly all of the flints that

represented the new types described, he avowed himself to be among those who attributed the apparent chipping of their edges to the agency of Nature rather than to that of man. He was at an absolute loss to see how some of the specimens could in any way be regarded as artificial, or what purpose they could be supposed to have served. Primitive man, no doubt, made use of stones with sharp edges, whether natural or artificial, as cutting tools, but the peculiarity of many of the new forms was that the edges had been made blunt. In most gravel deposits of all ages the result of rolling attrition was to remove the sharp edges of the flints, and chipping such as that on most of the specimens exhibited might be seen on flints of any age. The presence of the better-formed implements in the beds rendered it needless to rely on the evidence of these doubtful forms, and even supposing them to be of human workmanship, there was no need of assigning them to a more primitive race than palæolithic man. In all deposits containing palæolithic implements there were examples of different degrees of skill and finish, and many fragments resulting from the process of manufacture as well as abortive productions. Though natural forms of flint were probably from time to time utilised as tools or implements by early man, he could not see the necessity of their being indicative of a specially primitive state of art. As to the staining of the implements he regarded it as the chemical result of the beds in which they had lain, and not as characteristic of age. In some cases the implements in lower and more recent gravels were deeply stained, while older implements in higher beds in the immediate neighbourhood remained uncoloured. The size of the implements, of course, depended on the size of the flints that were available as raw material, but one or two from the plateau were of large size and chipped out from still larger blocks of flint. The leaving of a large portion of the original surface of the flint untouched where its general form lent itself to the manufacture of an implement was by no means confined to the plateau implements, but was a common feature among those from the well-known river gravels. Taking the tray of specimens found at Ash as a typical example, he could see little in it to differentiate them from the ordinary forms. While thankfully accepting the discoveries of Mr. B. Harrison and Mr. De B. Crawshay, and recognising the importance of the geological theories brought forward by Professor Prestwich, he could not but recommend extreme caution before accepting the majority of the specimens exhibited as being of human manufacture, or regarding what undoubtedly might have been the work of nature as being indisputably that of man.

General PITT-RIVERS said that for the last ten years he had confined his attention chiefly to the Romano-British period, because he happened to live in the neighbourhood of a great number of antiquities of that age. Anthropology had no special periods of its own, and work could be done very much more thoroughly by anyone who lived on the spot. Before that, however, when living in

another place, he had discovered drift implements *in situ* beneath gravel at Acton and Ealing, and also in the gravel of the Valley of the Nile, so that the subject of Professor Prestwich's paper was of interest to him. He had always thought that a time would come when implements of a ruder type than those of the river drifts would be discovered. It was hardly reasonable to suppose that implements of the high finish and form of some of the known palæolithic ones should be the earliest implements contrived by man. A single chip or a couple of chips off a rude nodule of flint would be sufficient to constitute a useful tool for some purposes, and at the time of the very first commencement of the arts, probably the ideas of men would go no further. He was not surprised to see such a number of hollow scrapers amongst the implements exhibited. One of the first ideas that would suggest itself to men just emerging out of the condition of the brutes, would be to take up a natural unformed flint with a sharp edge and use it for planing or rounding the surface of a stick. The peculiarity of the fracture of flint is that its edge does not become rounded in use like a piece of metal or a piece of wood, but it breaks off in sharp edges, so that a natural flint so used would become sharper and more efficient by continued use up to a certain point. The art of making such hollow scrapers would therefore come naturally to the incipient tool-maker, and he had no doubt some of the hollow scrapers exhibited might actually have been formed in this way. But the chief interest of the paper appeared to him to consist in the suggestion made by Mr. Prestwich, that these primitive tools, now exhibited, most of which, though he thought not all, were undoubtedly artificial, found as they were upon the surface of the chalk plateau at a height of 600 to 800 feet above the sea level, are not, as some of us have been in the habit of supposing, wasters or ill-formed specimens of the neolithic or of the river drift period, but characteristic samples of the art of an earlier period than the river drift, that they were derived from earlier and perhaps even from tertiary deposits, which originally overlay the chalk plateau, but had been washed away by denudation, leaving only these relics behind them. This, however, as Mr. Prestwich has been the first to admit, has not as yet been proved by their *gisement*, and that is certainly the kind of proof we require in order to determine the point, for there is nothing in their position upon the surface, at whatever height, to disprove their being of a comparatively recent period of the stone age, nor is there anything in the way of associated remains to attest their great antiquity. Rudely chipped flints, not unlike those exhibited, are certainly found both in the gravels of the river drift and on the surface of the neolithic period, and are often neglected and thrown away. In the flint mines at Cissbury of the neolithic age, innumerable wasters were found. Probably for every well-formed implement of neolithic type, as many as sixty or seventy wasters were found, which were not preserved. But still, there is a difference between these wasters and the forms now exhibited.

The Cissbury wasters were all formed out of quarried flints, whilst these are made out of flints that have been weathered in the gravels. Many of the Cissbury wasters were evidently half-finished tools, whilst a much larger proportion of these have evidence of having been finished tools of a rude type. One thing, however, appears to be very promising. If the superincumbent deposits that have now been swept away, have left behind them so many specimens of man's handy-work, scattered upon the surface of the chalk plateau, they must have been pretty thickly distributed in the deposits themselves. There is everything, therefore, to stimulate further close examination of such patches of tertiary and other strata, as may still remain upon the plateau. He hoped that Mr. Harrison and Mr. Crawshay, who appeared to be the principal flint hunters, would continue their researches, that careful sections would be drawn of the actual sites of any discoveries that may be made, and that, strengthened as they were by the support given them by so distinguished a geologist as Mr. Prestwich, they would not give the matter up until it had been thoroughly worked out. Mr. Prestwich himself did not accept the antiquity of the implements of the drift period until he and others had found them embedded in the gravels of the Valley of the Somme, in connection with the bones of extinct animals. We did not accept the antiquity of the implements scattered about on the surface in the Nile Valley, until they had been found low down beneath seams of sedimentary deposits in the delta of the Waddi at Koorneh in gravel that had become so indurated that the Egyptians had cut their tombs in it, and the implements were chipped out of the gravel forming the vertical walls of the tombs. These are the precedents upon which our existing beliefs have been formed, and we certainly ought not to be satisfied with less conclusive evidence for the antiquity of implements of a still earlier date.

Prof. BOYD DAWKINS felt unable to accept the conclusion advanced in the paper that the implements were older than those of the ordinary river drift. True river drift implements had been found on the plateau, along with those of the ruder form, and there was nothing to forbid the inference that the river drift hunter wandered over the uplands as well as the lowlands, leaving his implements behind at high and low levels alike. The numerous rude implements found on the plateau, as compared with their general absence from collections made in other places was due, in his opinion, to the fact that they had not been collected in the other places, and that the best implements had alone been preserved. Nor is their rudeness an index of their age. He possessed a parallel series from the river drift floor of the Cresswell caves, which ranged from the pot boiler and hammer stone through the whole rude series up to the ordinary typical *hâche*. He had also observed the same amount of rude form with highly finished implements and pottery in the area frequented by the Red Indians near Trenton, in the Valley of the Delaware. In both these cases

there can be no doubt that the same people used the ruder and more finished implements. Nor is there any evidence of high antiquity from the *gisement* of the implements in question, seeing that they had been found either on the surface of "the clay with flints," or under circumstances that admitted of their having been derived from the surface. As the facts stood in the paper it was not proved that they belong to the age of the clay. He congratulated the Society on having listened to so interesting a paper, which would not fail to advance the knowledge of the palæolithic people.

Mr. ALLEN BROWN said a large number of the specimens on the tables present indubitable evidence of human work; and he fully concurred with General Pitt-Rivers, who had recognised in some of the worked flints, the rudimentary forms of certain types found in the valley drifts—with some adverse criticism, as to some of the specimens, Dr. John Evans had also expressed his opinion, that others were certainly of human origin.

If some of the specimens showed clear evidence of being shaped by human agency, and he should place the larger number under that category—it seemed to him sufficient for the purpose of this paper. The relative age of these implements, to those found in the highest level of the present valley drifts, was then the most important question. It would, of course, be desirable that some of the implements should be found *in situ beneath* as well as on the surface, though it was impossible to connect them with the neolithic stage of human history.

Another theory might be put forward to explain the important discovery of these rude implements on the chalk plateau at 600 to 800 feet—*i.e.*, that they may have been left by the almost pre-mative men who fabricated them on an older land surface, and that as the carbonate of lime composing the chalk became dissolved by springs and disintegrated from sub-aerial agency (the result being the red clay with flints, and a general lowering of the surface), they may have become embedded and preserved in the residue of silica and alumina left by the chalk. The accumulation of the red clay must have taken place so slowly, that the implements found in the red clay would still indicate a high antiquity.

On the whole, however, and having regard to the other facts referred to in Professor Prestwich's paper, it would appear that the theory adopted by the author is far more probable, *i.e.*, that the deposit in which they are found is the *remanie* of an old drift deposit formed before the present valleys had been eroded, and by rivers flowing outward from the formerly much elevated land of the Weald.

This being so, the date of man's entrance into this country must be carried much further into the remote past than has, as yet, generally been accepted; and he may have lived as he, the speaker, believed from other and cogent reasons he did live, before or during the incoming colder conditions of climate in Great Britain.

Having for many years been forming a collection of palæolithic implements from the Thames Valley, &c., with the view of establishing a general classification of these ancient relics, the object has been to obtain not only the best examples of palæolithic work, but any flint, however rudely or simply wrought, provided the evidence of human fabrication was shown in it. He found that a comparatively small proportion of the specimens discovered in the highest drift gravels north of the Thames were not only more coarsely or less skilfully made, but that their surfaces were almost obliterated by abrasion and weathering, and so different from others as to constitute a distinct class. They were entirely different in outward conditions—from the sharp, lustrous, well-formed implements with which they are found associated in the drift; they were not only much abraded, but deeply ochreous, and in many cases the surfaces had been eroded by the action of some solvent, as in the case of banded flints.

He had brought a selection of these implements, most of them from the Valley of the Thames, and one from the very high level drift near Farnham (360 feet, O.D.), and it seemed very remarkable that their forms and surface character closely resembled those discovered by Mr. B. Harrison and his co-workers in Kent. Among them will be found the same types, including the peaked, rudely pointed and clumsy oval forms. He had always considered such specimens as these as derived, but from whence? Professor Prestwich's theory offered a solution to this question, and it now seemed to him (J. Allen Brown) as highly probable that they came originally from an older deposit, perhaps from a plateau, formerly on the north side of the Thames, corresponding in age to that on the chalk escarpment in Kent.

The enormous denudation and erosion of the softer tertiaries on the north which has taken place in quaternary times has, to a large extent swept away the same kind of evidence which Professor Prestwich has adduced from the other side of the valley. Looking to the forms and superficial characters of both series of specimens, they certainly point to an earlier stage of human development than has hitherto been shown.

He thought the Institute was much indebted to Mr. B. Harrison for initiating these investigations in his neighbourhood, and to Mr. De B. Crawshay and Mr. Bell, &c., for having continued them so successfully, as well as to Professor Prestwich for the admirable way in which he had arranged and shown the true significance of their discoveries.

In reply, Professor PRESTWICH said that he had looked forward to the possibility of there being some substantial objections to his views which might have escaped him. He had, however, heard nothing but an amplified repetition of the very same difficulties which had occurred to him, and had been discussed and explained in the paper. His friend, Dr. Evans, had objected to the workmanship of some of the specimens. A few days spent on the

ground would, he thought, induce him to change that opinion. At the same time he would not undertake to say that every one of the 300 or 400 specimens on the table would pass muster.¹ He (Prof. Prestwich) by no means intended it to be understood that the rudeness of form was peculiar to the plateau specimens, or was by itself, an indication of age. There were rude and badly made specimens of all ages. What he contended for was, that besides there being a much larger proportion of rude and badly made specimens than in the valley drifts, they were also of peculiar and special types, and that they were confined to a particular and distinct area. This had met with no response. That there were a few forms in common had been pointed out, but this was just what might have been expected when the tribes who occupied the ground were of the same descent. Dr. Evans offered no alternative explanation to account either for the anthropological or the geological difficulties. With regard to the observations of Professor Boyd Dawkins, he failed to see the drift of them, except the expression of a general disbelief. They seemed to him irrelevant, and not directed to the real issue. No light was thrown on the admitted difficulties of the problem, while others not raised by the paper were the subject of criticism. As to his suggested explanation of the geological phenomena, it involved physical impossibilities, which he felt sure the speaker would not have propounded had he been better acquainted with the ground. The author would have been glad to have had any well-considered alternative explanation suggested, but none was forthcoming. The views which had been advanced must, of course, stand or fall upon the evidence which had been brought forward; but the author had every confidence that the further investigation which is needed would confirm his facts and corroborate his opinions.

NOVEMBER 10TH, 1891.

EDWARD B. TYLOR, Esq., D.C.L., F.R.S., *President, in the Chair.*

The Minutes of the last meeting were read and signed.

The following elections were announced:—

Lieut.-Colonel JOSEPH HARTLEY, LL.D., of The Old Downs Hartley.

A. M. PATERSON, Esq., M.D., of University College, Dundee.

S. TSUBOI, Esq., of 14, Richmond Terrace, Clapham Road.

¹ Though slight, so definite is the work that even the labouring men employed by Mr. Harrison to collect for him in the field, when once tutored in the difference between the natural and the artificial forms, rarely make a mistake in the specimens they bring him.

OSBERT H. HOWARTH, Esq., of College Hill Chambers,
Cannon Street.

MD. SUTTHIR HUSAIN, Esq., of Moore's Gardens, Madras.

The following presents were announced, and thanks voted to the respective donors:—

FOR THE LIBRARY.

From the SECRETARY OF STATE FOR THE COLONIES.—Despatches from His Honour the Administrator of British New Guinea. Fol.

From the SECRETARY OF STATE.—Memoria que la Secretaria de Estado en el Despacho de Fomento presenta á la Asamblea Legislativa de la República de Guatemala en sus sesiones ordinarias de 1891. 8vo. Guatemala, 1891.

From A. W. FRANKS, Esq.—Statement of the Progress and Acquisitions made in the Department of British and Mediæval Antiquities and Ethnography in the year 1890. 8vo.

From Dr. E. B. TYLOR.—Grammar of the Otchipwe Language; and English-Otchipwe Dictionary. By R. R. Bishop Baraga. 8vo. Montreal, 1878.

From CUTHBERT E. PEEK, Esq.—Annual Report of British New Guinea from 1st July, 1889, to 30th June, 1890. With Appendices. Fol. Brisbane, 1890. (Maps.)

From GEORGE W. BLOXAM, Esq.—History of Civilization in England. By H. T. Buckle. 3 vols. 8vo. London, 1873.

— English-Welsh and Welsh-English Dictionary. By W. Spurrell. 8vo. Carmarthen, 1870 and 1859.

— Narrative of a visit to the Courts of Russia and Sweden, in the years 1830 and 1831. By Captain C. Colville Frankland. 2 vols. 8vo. London, 1832. Plates.

From the SECRETARY GENERAL.—Actes du II^{me} Congrès International d'Anthropologie Criminelle. 8vo. Paris, 1890.

From the AUTHOR.—The Social Emancipation of the Gipsies. By J. Simson. 8vo. New York, 1891.

— The diminution of the Jaw in the Civilized Races an effect of disuse. 8vo. London, 1891. By F. Howard Collins.

— The Collection of Ancient Marbles at Leeds. By E. L. Hicks. 4to. Plate and Woodcuts.

— Spasmodic Wry-neck. By Noble Smith. 8vo. London, 1891.

— The Eskimo Tribes. By Dr. H. Rink. 8vo. Copenhagen and London. 1891. Plate and Map.

— Die Kranimetrie und ihre jüngsten Reformatoren. By Professor J. Kollmann. 4to. 1891.

— Crozet's Voyage to Tasmania. By H. Ling Roth. 8vo. London, 1891. Plates.

- From the AUTHOR.—The Maori-Polynesian Comparative Dictionary. By Edward Tregear. 8vo. Wellington, 1891.
- I Celti e la formazione delle odierne nazionalità Francese, Spagnuola ed Inglese. By G. Nicolucci. 4to. Naples, 1891.
- Avanzi di animali fossili rinvenuti presso Gioia del Colle, in Provincia di Bari. By G. Nicolucci. 4to. 1891.
- L'Uomo e le Scimmie. By G. Nicolucci. 4to. Naples, 1891.
- Un periodo preistorico l'età del ferro. By G. Nicolucci. 4to. Naples, 1891.
- I Semiti quel che furono e quel che oggi sono. By G. Nicolucci. 4to. Naples, 1890.
- Gli Aryi e le origini Europee. By G. Nicolucci. 4to. Naples, 1891.
- Sguardo sull' etnologia dell' egitto. By G. Nicolucci. 4to. Naples, 1891. Plates.
- Les aptitudes et les actes. By L. Manouvrier. 8vo. Paris, 1891.
- Crânes et Ossements d'Andresy. By L. Manouvrier. 8vo. 1890. Plates.
- L'Atavisme et le Crime. By L. Manouvrier. 8vo. 1891.
- L'Uomo preistorico in Italia. By Dr. Abele de Blasio. 8vo. Naples, 1891. Woodcuts.
- The Stone Hammer and its various uses. By J. D. McGuire. 8vo. 1891. Plates.
- Le Salvador Précolombien. By F. de Montessus de Ballore. Fol. Plates.
- From the DELEGATES OF THE CLARENDON PRESS.—The Melaneseans. By the Rev. R. H. Codrington, D.D. 8vo. Oxford, 1891.
- From the PUBLISHERS.—Modern Cremation. By Sir H. Thompson. 2nd Edition. 8vo. London, 1891. (Kegan Paul, Trench, Trübner, and Co.)
- The History of Human Marriage. By Edward Westermarck. 8vo. London, 1891. (Macmillan and Co.)
- Contemporary Socialism. By John Rae, M.A. 2nd Edition. 8vo. London, 1891. (Swan Sonnenschein and Co.)
- Dissolution and Evolution and the Science of Medicine. By C. Pitfield Mitchell. 8vo. London, 1891. (Williams and Norgate.)
- Charles Darwin: his life and work. By C. F. Holder. 12mo. New York and London, 1891. (G. P. Putnam's Sons.) Illustrated.
- Hazell's Annual for 1891. Edited by E. D. Price. 8vo. London, 1891. (Hazell, Watson and Viney.)
- From the ÉCOLE D'ANTHROPOLOGIE (Paris).—Revue mensuelle, 1891. Nos. 7-10.
- From the GEOLOGICAL SURVEY OF NEW SOUTH WALES.—Records. Vol. ii Part 3.

- From the GOVERNMENT OF PERAK.—The Perak Government Gazette. Vol. iv. Nos. 13-15, 18, 19, 25, 27-29.
- From the INDIA OFFICE.—Epigraphia Indica and Record of the Archæological Survey of India. Part 7: List of Indian Government Publications. Aug. 1891.
- From the DEPARTMENT OF MINES, NEW SOUTH WALES.—Annual Report. 1890.
- From the ACADÉMIE DES SCIENCES DE CRACOVIE.—Bulletin International. 1891. No. 6.
- From the ACADÉMIE ROYAL DES SCIENCES DE BELGIQUE.—Annuaire, 1890, 1891: Mémoires couronnés et autres mémoires. T. xliii, xlv, xlv; Bulletins. T. xviii, xix, xx, xxi; Catalogue, Part 2: Mémoires couronnés et mémoires des savants étrangers. T. 1, li.
- From the KAISERLICHE AKADEMIE DER WISSENSCHAFTEN (Vienna).—Sitzungsberichte. philos.-histor. Classe, Band 122, 123; math.-naturw. Classe, I. Abthlg. 1890. Nos. 4-10; IIa. Abthlg. 1890. Nos. 4-10; IIb. Abthlg. 1890. Nos. 4-10; III. Abthlg. 1890. Nos. 4-10. Almanach, 1890.
- From the KONGL. VITTERHETS HISTORIE OCH ANTIQVITETS AKADEMIEN.—Antiqvarisk Tidskrift för Sverige. Del. xii, 3, 4.
- From the ROYAL IRISH ACADEMY.—Transactions. Vol. xxix. Part 16. Proceedings. Third Series. Vol. i. No. 5. Vol. ii. No. 1. Cunningham Memoirs. No. 6.
- From the DEVONSHIRE ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, LITERATURE, AND ART.—Report and Transactions. Vol. xxiii. The Devonshire Domesday. Part 8.
- From the EAST INDIA ASSOCIATION.—Journal. Vol. xxiii. Nos. 2, 4.
- From the GEOLOGISTS' ASSOCIATION.—Proceedings. Vol. xii. Nos. 1-4.
- From the ESSEX FIELD CLUB.—The Essex Naturalist. Vol. v. No. 6.
- From the NATURALISTS' CLUB (Berwick).—History. 1887-89.
- From the EDITOR.—The American Antiquarian. Vol. xiii. Nos. 3-5.
- Bullettino di Paleontologia Italiana. T. vii. N. 1 a 4.
- Die Urgeschichte des Menschen. Parts 6-12.
- Internationales Archiv für Ethnographie. Band iv. Heft 4, 5.
- The Journal of Mental Science. Vol. xxxvii. Nos. 122, 123.
- L'Anthropologie. Tome ii. Nos. 3, 4.
- L'Anomalo. Anno iii. N. 6, 7, 8-9.
- Nature. Nos. 1130-1149.
- Revue Scientifique. Tome xlvii. No. 26. Tome xlviii. Nos. 1-19.
- Revista Argentina da Historia Natural. Tomo i. Entrega 3-5.
- Science. Nos. 436-450.

- From the EDITOR.—The Monist. Vol. i. No. 4. Vol. ii. No. 1.
 — The Journal of Heredity. Vol. vi. No. 3.
- From the NEW ZEALAND INSTITUTE.—Transactions and Proceedings.
 Vol. xxiii. 1890.
- From the ROYAL COLONIAL INSTITUTE.—Proceedings. Vol. xxii.
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- From the KONINKLIJK INSTITUUT VOOR DE TAAL-, LAND-EN VOLKEN-
 KUNDE VAN NEDERLANDSCH-INDIË.—Bijdragen tot de Taal-,
 Land-en Volkenkunde van Nederlandsch-Indië. 1891. 5e
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- From the ROYAL UNITED SERVICE INSTITUTION.—Journal. Nos.
 161-165.
- From the SMITHSONIAN INSTITUTION.—Report, 1889. Miscellaneous
 Collections. Nos. 594, 663, 785. Contributions to Knowledge.
 No. 801.
- From the AUSTRALIAN MUSEUM.—Records. Vol. i. No. 8.
- From the PEABODY MUSEUM.—Reports. Vol. iv. Nos. 3, 4.
 Archæological and Ethnological Papers. Vol. i. Nos. 2, 3.
 Palæolithic Man in Eastern and Central North America.
 Part 3.
- From the ANTHROPOLOGISCHE GESELLSCHAFT IN WIEN.—Mittheilun-
 gen. Band xxi. Heft 2 und 3.
- From the ANTHROPOLOGICAL SOCIETY OF WASHINGTON.—The Ameri-
 can Anthropologist. Vol. iv. No. 3.
- From the BERLINER GESELLSCHAFT FÜR ANTHROPOLOGIE, ETHNOLOGIE
 UND URGESCHICHTE.—Zeitschrift für Ethnologie, 1891. Heft
 3, 4.
- From the BENGAL ASIATIC SOCIETY.—Journal. Vol. lviii. Nos.
 305-310. Proceedings, 1891. Nos. 2-6.
- From the DEUTSCHE GESELLSCHAFT FÜR ANTHROPOLOGIE, ETHNOLOGIE,
 UND URGESCHICHTE.—Festschrift der Allgemeinen Ver-
 sammlung. Band xxii.
- From the FOLK-LORE SOCIETY.—Folk-Lore. Vol. ii. No. 3.
- From the NIEDERLAUSITZER GESELLSCHAFT FÜR ANTHROPOLOGIE UND
 URGESCHICHTE.—Mittheilungen. Band ii. Heft 1, 2.
- From the PHYSICO - ÖKONOMISCHE SOCIETAT (Königsberg).—
 Schriften. 1890.
- From the PHILOSOPHICAL AND LITERARY SOCIETY OF LEEDS.—Annual
 Report. 1890-91.
- From the ROYAL AGRICULTURAL AND COMMERCIAL SOCIETY OF
 BRITISH GUIANA.—Timehri. Vol. v. Part 1.
- From the ROYAL ASIATIC SOCIETY, CEYLON BRANCH.—Journal. Vol.
 xi. No. 38. Proceedings. 1887-88.
- From the ROYAL DUBLIN SOCIETY.—Proceedings. Vol. vi. Part
 10. Vol. vii. Parts 1, 2. Transactions. Vol. iv. Parts 6-8.
- From the ROYAL GEOGRAPHICAL SOCIETY.—Proceedings. Vol. xiii.
 Nos. 7-11.
- From the ROYAL SCOTTISH GEOGRAPHICAL SOCIETY.—The Scottish
 Geographical Magazine. Vol. vii. Nos. 7-11.
- From the ROYAL SOCIETY.—Proceedings. Vol. xlix. Nos. 300-302.

- From the ROYAL SOCIETY OF ANTIQUARIES OF IRELAND.—Journal of the Proceedings. Vol. i. Nos. 6, 7.
- From the ROYAL SOCIETY OF CANADA.—Proceedings and Transactions. Vol. viii.
- From the ROYAL SOCIETY OF EDINBURGH.—Proceedings. Vol. xvii. Transactions. Vols. xxxiv and xxxvi, Part 1.
- From the ROYAL SOCIETY OF NEW SOUTH WALES.—Journal and Proceedings. Vol. xxiv. Part 2.
- From the ROYAL SOCIETY OF TASMANIA.—Papers and Proceedings. 1890.
- From the ROYAL STATISTICAL SOCIETY.—Journal. Vol. liv. Part 2.
- From the SOCIEDADE CARLOS RIBEIRO.—Revista de Ciencias Naturaes e Sociaes. Vol. ii. No. 6.
- From the SOCIÉTÉ ARCHEOLOGIQUE (Agram).—Viestnik hrvatskoga Arkeologičkoga Društva. Godina xiii. Br. 3, 4.
- From the SOCIETÀ ITALIANA DI ANTROPOLOGIA, ETNOLOGIA, E PSICOLOGIA COMPARATA.—Archivio per l'Antropologia e la Etnologia. Vol. xxi. Fas. 1, 2.
- From the SOCIETY OF ARTS. Journal. Nos. 2014–2033.
- From the SOCIETY OF ANTIQUARIES.—Proceedings. Vol. xiii. No. 3. Archæologia. Vol. lii. Part 2.
- From the SOCIÉTÉ D'ARCHÉOLOGIE DE BRUXELLES.—Annales. Tom. v, liv. 2–4.
- From the SOCIETY OF BIBLICAL ARCHEOLOGY.—Proceedings. Vol. xiii. Part 8.
- From the SOCIÉTÉ IMPÉRIALE DES NATURALISTES DE MOSCOU.—Bulletin. 1891. No. 1.
- From the VEREIN FÜR ERDKUNDE (Leipzig).—Wissenschaftliche Veröffentlichungen. Band i.
- From the UNIVERSITY OF TOKIO.—Journal of the College of Science, Imperial University, Japan. Vol. iv. Part 1.

Mr. FRANCIS GALTON exhibited, on behalf of Lady BROOKE (H.H. the Ranee of Sarawak), a photograph of a human figure found in Sarawak, sculptured upon the side of a hill, upon which Dr. TYLOR and Mr. RANDALL H. PYE made some remarks.

Mr. FRANCIS GALTON exhibited some imprints of the hand by Dr. FORGEOT, of the Laboratoire d'Anthropologie Criminale, Lyon.

Dr. TYLOR read a paper on "The Limits of Savage Religion."

Mr. SIDNEY H. RAY and Mr. DISTANT joined in the discussion.

PHOTOGRAPH of HUMAN FIGURE found in SARAWAK.

Exhibited by Lady BROOKE (H.H. the Ranee of Sarawak).

MR. F. GALTON said that the photograph is of a rounded sandstone rock about 12 feet high, on which the prone and sprawling figure of a man is carved in high relief, and of the size of life. The figure is for the most part true to nature and in correct proportion. The head rests almost on the top of the rock, and is consequently so much foreshortened in the photograph that little is to be made out, even in respect to the head-dress. The rock lies in the jungle, at the side of a small stream, close to its junction with the main river near to Sarawak. The sculpture was discovered a few months since by a man who was clearing a patch of jungle, but there is reason to believe that some of the natives were previously aware of its existence, and held it in superstitious dread. The Rajah, Sir Ch. Brooke, was much impressed by its revolting appearance. It is difficult to offer a reasonable guess as to the object of so strange a piece of workmanship, or of the nationality of the man who took the considerable pains necessary to carve it. Chinese and other buried coins have been found close by, but the figure does not look like the work of Chinese, Hindoos, Malays, or Dyaks. It can hardly have been sculptured in recent years, and in former times the coast was avoided by the Dutch and other European navigators. The figure of a man lying face downward on the shoulder of the rock, with his hands and legs disposed as if he were climbing it for treacherous purposes, suggests the idea that a man was killed on the rock in that very act, and that the bloody stains left on the stone by his body and limbs suggested the idea of cutting out his figure in high relief, to serve as a memorial of the event and as a kind of human scarecrow. In such a case it would follow that wherever the stains were sufficiently well-marked to guide the sculptor the carving would be an exact though rude representation of a human body; but where they were imperfect or absent, the sculptor would be left to his own resources, and we should expect him to fall into errors of proportion. This is just what we find here.

IMPRINTS of the HAND, by DR. FORGEOT, of the LABORATOIRE
D'ANTHROPOLOGIE CRIMINALE, LYON.

Exhibited by FRANCIS GALTON, Esq., F.R.S.

A FEW weeks ago Prof. Lacassaigne, of Lyons, was so good as to show me the extremely interesting laboratory of criminal anthropology that he had called into existence in connection with the

medical school at that place. The various workers at his laboratory publish pamphlets from time to time, of which not a few treat upon subjects that are of interest to our own Institute. I lay some of these on the table. Among them is a pamphlet by Dr. Forgeot describing a new process of rendering visible, the previously invisible details of such faint finger-prints as thieves may have left on anything they may have handled. The object is to supply evidence for subsequent identification. It is well known that the pressure of the hand on the polished surface of glass or metal leaves a latent image very difficult to destroy, which may be developed by suitable applications, but few probably have suspected that this may be the case, to a considerable degree, with ordinary paper. Dr. Forgeot has shown that if a slightly unctuous hand, such for example as a hand that has just been passed through the hair, be pressed on clean paper, and if common ink be lightly brushed over it, the ink will refuse to lie thickly on the greasy parts of the paper, and the result will be the production of a very good picture of all the minute markings of the fingers. I will show the process itself, and submit to the meeting some prints that Dr. Forgeot has sent me. He has even used these as negatives, and printed good photographs from them. He also has sent a photographic print made from a piece of glass which had been exposed to the vapour of hydrofluoric acid, after having been touched by a greasy hand.

I may say that I know of at least one recent case in which some such process as this could have been used with effect. A burglary was committed in a style that left no doubt in the minds of the detectives that it had been done by well practised hands. A perfectly distinct finger-print was left on one of the panes of a window, but the detectives were not acquainted with the fact that if the imprint on that pane of glass had been, for the moment, protected from injury, and afterwards copied at leisure, an evidence of the strongest character would be afforded as to whether any suspected person was or was not the person who made that imprint.

Dr. Forgeot's pamphlet contains the description of many processes besides those I have especially mentioned.

On the LIMITS of SAVAGE RELIGION.

By EDWARD B. TYLOR.

IN defining the religious systems of the lower races, so as to place them correctly in the history of culture, careful examination is necessary to separate the genuine developments of native theology from the effects of intercourse with civilized foreigners. That foreign travellers and missionaries sometimes

read their own ideas into the religions of savages is in a general way acknowledged, but the statements thus made require more careful examination than they have yet received. Moreover, that foreign ideas have thus become incorporated in the religions of low tribes here and there, and now and then, no one conversant with books of travel will dispute, but I shall have to show that such borrowing has taken effect to a greater extent than is generally supposed. Especially through missionary influence, since 1500, ideas of dualistic and monotheistic deities, of moral government of the world, and of retribution after death for deeds done in life, have been implanted on native polytheism in various parts of the globe.

The mistaken attribution to barbaric races of theological beliefs really belonging to the cultured world, as well as the actual development among these races of new religious formations under cultured influence, have been due to several causes, of which instances will be given in the course of this paper.

1. Direct adoption from foreign teachers.
2. The exaggeration of genuine native deities of a lower order into a god or devil.
3. The conversion of native words denoting a whole class of minor spiritual beings, such as ghosts or demons, into individual names alleged to be those of a supreme good deity or a rival evil deity.

Most distinct cases of the borrowing and adaptation of dualistic and monotheistic ideas by tribes of the lower culture from nations of the higher culture are to be found in the New World. Conspicuous among these is the famous belief in the "Great Spirit" of the North American Indians, who for the last century and more has been brought forward by philosophers as the type of deity discovered by or implanted in or revealed to

" . . . the poor Indian, whose untutor'd mind,
Sees God in clouds, and hears Him in the wind."

Yet the historical evidence that the Great Spirit belongs not to the untutored but to the tutored mind of the savage, is preserved for us in the records of the tutors themselves, the Jesuit missionaries in Canada. I need not do more than refer to what has been written of late years by anthropologists, Brinton, Henshaw, and others, further than to say that it clears and strengthens the evidence of the passages in the records of the Jesuit missionaries in Canada between 1611 and 1634,¹ which give locality and date to the beginning of the process of teaching that was to convert the polytheistic

¹ "Relations des Jésuites dans la Nouvelle-France," Quebec, 1865, vol. i, 1611, p. 20; 1633, p. 17; 1637, p. 49.

animism of the Ojibwas and other tribes into a kind of savage version of the philosophic deism of which the European mind was at that time full. There are mentions among Algonquin tribes of the word *manitu*, which in their languages meant, as it has continued to mean, a spirit of any kind. Thus Father Le Jeune remarks that there are men among them who make profession of consulting their Manitu, by which they mean, as among us, an angel or some powerful nature, which they think good and bad. The Montagnet savages, he writes, give the name of manitu to every nature superior to man, good or bad; this is why, when we talk to them of God, they sometimes call him the good Manitu, and when we talk to them of the devil, they call him the bad Manitu. This interesting passage is the first where the word *manitu*, or spirit appears with an attribute, as representing the great good and evil beings of Christianity. The latter, Matchi Manitu, the Bad Spirit, has held his place ever since in native American theology; the former, Mino Manitu, the Good Spirit, is less known under that name, but came to be more generally described as the Kitchi Manitu, or Great Spirit (also Kije Manitu, or Perfect Spirit), or as the Manitu *par excellence*. Let me now call attention to passages showing this transition, when the term "great Spirit" (the adjective not yet with a capital) is just coming into use as the European equivalent of the Algonquin Kitchi Manitu, and applying itself to North American belief in its Europeanized form. Father Lafitau, in his work on the manners of the American savages,¹ published in 1724, shows how the teaching of the Company had consolidated this doctrine during the eighty or ninety years they had been at work. This learned missionary now simply takes as native belief, what his own fellow missionaries had recorded their having themselves taught the Indians. All the nations of America, he says, whether settled or nomade, have strong expressions which can only denote one God. They call him the Great Spirit, sometimes the Master or Author of life. Even the Ottawas, who seem the most brutal and least spiritual of these peoples, invoke him often as the Creator of all things. In another passage, he illustrates in the most perfect way, quite without recognizing the bearing of his own words, the still more insidious mistake by which foreigners ascribe to rude races deities not really imagined in savage thought. The whole class of spirits or demons, known to the Caribs of the West Indies by the name of *cemî*, in Algonquin as *manitu*, in Huron as *oki*, he now spells with capital letters, and converts them each into a

¹ Lafitau, "Mœurs des Sauvages Américains comparées aux Mœurs des Premiers Temps," Paris, 1724, vol. i, p. 124.

Supreme Being, "Ce Grand Esprit connu chez les Caraïbes sous le nom de *Chemîin*, sous celui de *Manitou* chez les nations Algonquines, et sous celui d' *Okki* chez celles qui parlent la langue Huronne," &c.

Had the effect of Christian teaching during the last few centuries been only to introduce the belief in and name for one supreme deity among tribes like the Canadian Indians, it would be comparatively easy for students to understand the state of things, and to keep the new, borrowed, ideas separate from the old native beliefs belonging to the days before white influence, when, to the red man, a prayer to the divine sun or the divine sky for fine weather or plentiful game represented the extreme development of native polytheism. But the actual problem presented to the anthropologist is far more complex. He has to deal with two processes, which have now gone on in America for more than a century. The Europeans have carried the term "Great Spirit," far and wide over the Continent, using it in the broken language in which they communicate with the Indians, and thus have even naturalized it among them; so that this great being has supplanted the indigenous nature-gods, and adopted and been adapted to their characteristics. The result has been in part a misinterpretation, and in part an actual transformation of the native religions, which is, even with the utmost care and the best information, hard to unravel. When it is related by a traveller how the Osage Indians smoke toward the Great Spirit with a prayer to him to smoke with them as a friend, and help them to overcome their foes, it is necessary to find whether the bringing in this alien deity into the Osage religion is due to the Indians explaining their ceremony in such English as the European would understand, or whether they had actually taken to the Great Spirit as equivalent to or supplanting a god of their own.

Instead of following up this enquiry, a similar one may be taken up on better known ground. Hardly any account of the religious rites of the North American Indians is so familiar to English readers as Catlin's life-like description of the Mandan festival, where the young braves were tortured by swinging suspended by splinters passed under the skin of their backs. The whole mystery was performed, he declares, in honour of the Great Spirit, on whom the victims called for strength to bear their agonies, and as a sacrifice to whom their finger joints were chopped off on the buffalo skull at the last scene of the grisly performance. Catlin has been accused of untruthfulness in his account, but so far as I have been able to sift his book, I should say he was simply truthful alike with pen and pencil. He gives what he saw and what was told him; and more education and

critical skill would no doubt have led him to spoil his testimony by trying to shape it. The religious rite he is describing is the celebration of a Deluge-legend by a performance of some days' duration, centring round the wooden structure set up in the village to represent that in which the ancestral Mandans were saved from the great flood. The festival was celebrated at the time of year when the willow leaves come out, for this (the Indians told him) was the kind of twig the bird had in her mouth when she came back to the ark. The Mandan flood-story is one of those which, reproducing the very details of missionary teaching, are evidence, not of native tradition, but of foreign influence. Catlin, unconsciously, even gives us the means of judging how modern the Mandan flood-story is, by his account of one of the proceedings of the celebration. There was collected from every house a knife, hatchet, or other cutting tool, as a sacrifice to be thrown into the water, because the ark had been made with such tools. Now we know, from Catlin's own pictures, what implements of these kinds the Mandans used; they were the ordinary traders' iron knives and hatchets. But stone implements cannot have been superseded among the Mandans much before 1700, by the iron implements with which they can then have been, for the first time, told that the ark was built. This dates the Deluge-legend; and the Great Spirit, who, according to Catlin, figured in it, cannot claim higher antiquity. The whole account is good as an instance of the manner in which such modern traditions betray by their details their modernness. In the present case we are able to compare with Catlin's account that of Prince Maximilian of Wied, who visited the Mandans not far from the same time. The descriptions of this scientific explorer, while wanting in the intimacy and picturesqueness of the wandering painter, strongly confirm Catlin's fidelity as to fact; but Prince Maximilian had altogether better knowledge of Mandan language, thought, and meaning of religious belief. He, of course, saw the obvious traces of religion borrowed from the white men. He gives a list of the Mandan deities, among whom figure Omahank Numakchi, the Creator, whose name appears to mean Lord of Earth; Numank Machana, the First Man; Omahank Chiké, the Evil one of Earth; and various other beings. But there is no Mandan deity whose name answers to that of Great Spirit; so that Catlin's account of his worship merely rests on an unfaithful translation of red man's religion into white man's language.¹

In South America, among the tribes of the regions of the

¹ George Catlin, "Letters on the North American Indians," No. 22. Prince Maximilien de Wied-Neuwied, "Voyage dans l'Intérieur de l'Amérique du Nord," Paris, 1840, vol. ii.

Orinoco, missionaries and travellers have recorded the names of great divine beings, good and evil, which, could they be received as native to these rude people, would prove that the religion of the lower culture involved a conception of a supreme creative being, and hardly less clearly a great evil being, these two being causes of moral retribution in a future state. Yet when the names of such deities are translated, the result throws light on their probable origin outside any native development of religion. The Otomac Givi-uranga means "the highest"; the Maipuri Purrùaminàri is translated "lord of all"; the Tamanacs call their supreme being Amanenè, that is, "creator" (from the verb *jamaneri*); and the Arawak Aluberi has the same sense (from the verb, *alìn*); the Carib term, Chi-jumucòn, translates "our great father." It is only necessary to collect and interpret such divine names for them to be set down to the influence of the missionaries, who for three centuries have been teaching them to the Indians. But the early writers, generally missionaries themselves, were less captious. The work of Father Gilij¹ is one of the best sources of information as to the language and habits of the Orinoco tribes. When the Maipuris explained to him how Purrùaminàri, the Lord of All, formed man, and when he slept took a rib from him and formed woman, the kindly but somewhat credulous missionary, though he well knew of European intercourse in the region from 1535 onward, was delighted at this proof of sacred tradition, preserved since the beginning of the human race. His admiration only increased when he learnt that, as in Genesis, Purrùaminàri created the light before the sun. When these unsophisticated savages presented him with traditions, not only of the Old, but the New Testament, in an account reproducing the very details of the birth of Christ, which he taught them as Christian dogma, "Now," he cries in triumph, "what have the atheists to say?" It will be naturally expected, and the expectation is abundantly fulfilled, that these tribes should have stories of a universal deluge told as native traditions, yet with details plainly borrowed or suggested from European teaching. Thus the Arawaks, in Richard Schomburgk's account, after an account of the creation of man and woman almost verbally biblical, went on to relate that the Bad Spirit gained the upper hand on the earth, so that when Makunaima, the Creator, sent great waters, only one man escaped in a canoe, from which he sent out a rat to see whether the water had fallen, and it came back with an ear of Indian corn.²

¹ Gilij, "Saggio di Storia Americana," Rome, 1780, vol. iii, ch. 4, &c.

² Richard Schomburgk, "Reisen in British-Guiana" (1840-4), Leipzig, 1848, Part II.

An instance or two may now be selected from the South American tribes to show the change which takes place under European influence in the idea of the condition of human souls after death. They no longer are supposed to continue in a ghostly existence without respect to their moral conduct on earth, but now the good are transported to happiness under the charge of the Good Being, the wicked are consigned to the unhappy region of the Evil Being. Yves d'Evreux, who was in Brazil in the 17th century, describes the Indian belief in the evil deity Girupari, to whom the wicked are given over after death. Jean de Lery, the Calvinist missionary, was still earlier, having made his short visit to the Tupinambas in 1557; his account is that these Indians think the souls of such as had lived virtuously, that is to say, who have well avenged themselves, and eaten many of their enemies, will go behind the great mountains and dance in beautiful gardens with the souls of their fathers, but the souls of the effeminate and worthless, who have not striven to defend their country, will go to Aygnan, the Evil Spirit, to incessant torments. This account of the future life probably in part represents original Indian ideas of the life after death, but who is Aygnan? The name Añanga appears in the Guarani Vocabulary of Ruiz de Montoya (about 1639), as the ordinary equivalent for Devil in the Missionary Catechism, and is interpreted as derived from *anga*, soul (literally shadow), and *aña*, to run (as if meaning "pursuer of souls"). Lery was naturally unfriendly to the Roman Catholic missionaries who had been for some while among his Indians before his time, and does not seem to have asked the question whether, as seems likely, it was they who had made the name of Añanga. As to the origin of the name Girupari, there is very early and good evidence in the Latin Epistle concerning the Province of S. Paul, by Joseph de Anchieta, the celebrated missionary, written during the 16th century and published in the *Collecção de Noticias*. It is as follows: "Concerning the nocturnal adversaries, or rather demons, which are wont to terrify the Indians, I will add a few words. It is known, and in all men's mouths, that there are certain demons whom the Brazilians call *Curupira*, who often attack the Indians in the woods, smite them with scourges, torment, and kill them. Of this our brethren, who sometimes have seen men killed by them, bear witness. Wherefore," he continues, "the Indians leave on a mountain as they pass feathers, fans, arrows, &c., as offerings, with prayers that they may not be harmed." Thus it appears that a whole demon-class came to be personified into an individual Indian Satan. After all, the process was only

that of the Spaniards and Portuguese in their own language, where *demonio* a demon, is developed into *el Demonio*, the Devil.¹

Australia demands especial attention from the present point of view. For a long period after Captain Cook's visit, the information as to native religious ideas is of the scantiest, but since the period of European colonists and missionaries, a crowd of alleged native names for the Supreme Deity and a great Evil Deity have been recorded, which, if really of native origin, would show the despised black fellow as in possession of theological generalizations as to the formation and conservation of the universe, and the nature of good and evil, comparable with those of his white supplanter in the land. I proceed to examine some of these many accounts, on which evidence can readily be brought to bear. A highly instructive one is that by Bishop Salvado, of the Benedictine Mission of New Norcia, north of Perth, in West Australia, dating from 1848, of the results of three years' enquiry as to the theology of the savages. They adore, he says, no deity, true or false. Yet they have an idea of an omnipotent being, creator of heaven and earth, whom they call *Motogon*, believed by them to be a wise old man of their own race, and they say that at the creation, he said, "Earth come forth," and breathed, and the earth was created, and so forthwith the waters, &c. Of this, the missionary points out the remarkable analogy with Genesis. They have also an idea of a malignant spirit, superior to them, whom they fear extremely, and call *Cienga* (Chenga), which spirit according to them, lets loose whirlwinds and floods of rain, invisibly slays their children, and dries up their flesh; he dwells in the centre of the earth. Whence the European narrator sums up, it may be concluded that these Australians admit two principles, that is, *Motogon*, author of good, and *Chenga*, of evil. But *Motogon*, according to them, no longer exists, he died in decrepit old age long ago, so no wonder they pay him no worship; what is unusual is that believing themselves afflicted by *Chenga* with constant calamities, they do nothing to propitiate him. But in thunderstorms they stamp on the ground and spit towards the sky, imprecating death and ill-luck on *Chenga*, whom they believe author of the evil, and run off to shelter under neighbouring trees.²

¹ Yves d'Evreux, "Voyage dans le Nord du Brésil" (1613-14), ed. Denis, Leipzig and Paris, 1864, p. 280, &c. Jean de Lery, "Histoire d'un Voyage fait à la terre du Brésil, 1594," p. 234. Antonio Ruiz de Montoya, "Arte, Bocabulario, &c., de la Lengua Guarani," pub. J. Platzmann, Leipzig, 1876, vol. i. Joseph de Anchieta, in "Collecção de Noticias das Nações Ultramarinas nos Dominios Portuguezes."

² Salvado, "Memorie Storiche dell' Australia," Rome, 1851, p. 295.

It is fortunately possible to interpret the accounts by the aid of earlier information. This West Australian region is that visited and excellently described by Sir George Grey, and of the languages of which we have dictionaries compiled years before by him and by Advocate-General Moore. From these it appears that the natives do talk of a spirit whom they call *Mettagong* or *Mittagong*, who is plainly the *Motagon* of Salvado; but far from being a supreme good deity, he is an insignificant demon identified with the phosphoric fungus. As for the *Chenga*, the evil deity of Bishop Salvado, who kills people and causes storms, and lives below ground, he is not an individual at all. The dead, or spirits of the dead, are called *djanga*, and the word is especially well understood from its being used for the foreigners whom the Australians, like many other races, regard as being their own dead returned from the distant region to which they have departed.¹ It is not, however, to be supposed that Bishop Salvado's work is valueless and to be set aside on account of these misapprehensions. On the contrary, much of the information it contains as to native belief is excellent; for instance, the accounts of the *uocol* or water-monster, whom the English spell *waugul*, and the causing of disease by magical introduction of bits of quartz into the patient by the power of the sorcerer—*boglia*, written in English *boylya*, or *boolia*. The two great native gods considered to exist are not imaginary, arising, as they do, the one from exaggeration of an insignificant native demon, the other from the name of a class of spirits transformed into the name of an individual spirit. The explanation of both misunderstandings seems to lie in the communication between whites and savages by broken language, where a few words, English or native, are strung together regardless of the particles or inflexions which, in either language, give a sentence its precise meaning. Such distinctions as that made by the English indefinite or definite article, drop away in such intercourse. Thus the savage, living in terror of beings corresponding closely to our ghosts or demons, has learnt to use and receive the word "devil" in talk about them, and will use such phrases as "devil catch him," "devil live down there," meaning a ghost or demon; but the foreigner, accustomed to ideas of a dominant Satan, writes the word down in his note-book with a capital, unconscious that he has converted the rude man's simple belief in spirits into a dualistic religion, where one great personal Evil Being presides over the powers of evil and stands as opponent of the Good Being.

¹ G. Grey, "Vocabulary of Dialects of South-West Australia," 2nd edition London, 1840. G. F. Moore, "Descriptive Vocabulary of the Language of the Aborigines of Western Australia," London, 1842.

Mr. Oldfield's account of the Watchandi tribe gives an opportunity of applying a different kind of test. In their religion the deity Nambajandi presides over Cadija (heaven), the region of delight and abundant game, where good black fellows dance and sing for evermore. Warrugura dwells in the regions below, and it appears that this latter evil spirit is described as having long horns and a tail; but, till the introduction of cattle by the white men, the Aborigines had never seen a horned beast, so that we infer that their doctrine of a horned devil belongs to the same late period.¹

With these examples before us of European ideas of deity attributed to or really implanted among the natives of Australia, let us now examine the evidence as to a supreme deity more widely known and accepted as belonging to the religion of the natives of Victoria. Mr. Hale, in the "Ethnographic Volume of Wilkes' Exploring Voyage," published in 1840, mentions among the Wellington tribes the deity Baiamai living on an island beyond the sea to the east; his food is fish; some natives consider him Creator, while others attribute the creation of the world to his son Burambin. Baiamai spoke and Burambin came into existence. The February dance to Baiamai was brought from a distance by natives.² In 1850 German Moravian missionaries who went from Melbourne into the interior to Mount Franklin recorded their communications with the natives they went to evangelize. Their intercourse was carried on partly by settlers who could interpret, and partly in the broken English of the natives, which incidentally proved how very closely these had been already in contact with the whites. A native, called Bonaparte, pointing up to the sky, explained to the missionaries that *Pei-a-mei* (God) dwelt up there. Asked what they thought of him, they said that their panghals (sorcerers or doctors) taught them he had made all things, but was easy to anger, wherefore they must appease him with dances. To this being he gave also the name *Mahman-mu-Rok*, which the missionaries considered to mean "father of all" (in fact *marmünth*, father, is in the Victoria dialect).³ Thus it appears that *Baiame* was already, about 1840, a being recognized among the natives, but endowed with very native attributes in their belief. In late years Mr. A. W. Howitt, in his minute and careful account of the native theology of this part of Australia, describes Baiame as he found him established in native thought, and quotes the story told him by a native

¹ Oldfield in "Transactions of the Ethnological Society," vol. iii, p. 228.

² Horatio Hale, "United States Exploring Expedition: Ethnology and Philology," Philadelphia, 1846, p. 110.

³ "Evangelisches Missions-Magazin," New Series IV, Basel, 1860, p. 241.

sorcerer who, according to custom, had gone to Baiame for instruction in the supernatural.

The following is in substance from the words of this native :—

“My father had said, we will go to Baiame’s camp. He got astride of a thread and put me on another, and we held by each other’s arms. At the end of the two threads was Wombu, the bird of Baiame. We went through the clouds, and on the other side was the sky. We went through the place where the doctors go through, and it kept opening and shutting very quickly. My father said that if it touched a doctor as he was going through, it would hurt his spirit, and when he returned home he would sicken and die.

“On the other side we saw Baiame sitting in his camp. He was a very great old man with a long beard; he sat with his legs under him and from his shoulders extended two great quartz crystals to the sky above him. There were also numbers of the boys of Baiame and his people, who are birds and beasts.”¹ These details, it will have been noticed, are, in some respects, of very native character, while in others recalling conventional Christian ideas of the Almighty.

An appendix to Mr. Brough Smyth’s “*Aborigines of Victoria*,” communicated by the Rev. W. Ridley, for many years a missionary in those parts, will bring us, I think, nearer to the origin of this alleged native divinity. Baiame, Mr. Ridley tells us, is the name by which the natives in the north-west and west of New South Wales designate the Supreme Being. The blacks there say he is Carbon-Massa, *i.e.*, Great Master, and when asked what they and their fathers know of Baiame, they reply that he made earth, and water, and sky, animals and men, that he makes the rain come down and the grass grow, that he delivered their fathers from evil demons, that he welcomes good people to the Great Watercourse and Grove (Warrambul) in the sky, which is the Milky Way, a paradise of peace and plenty; and that he destroys the bad. The word Baiame is derived, according to the Rev. C. C. Greenway, from *baia*, to make, cut out, build. “For ages unknown this race has handed down the word signifying ‘Maker’ as the name of the Supreme.”²

Let us now, however, enquire whether Baiame, near 1840 so prominent a divine figure among the Australians, was known to them at all a few years earlier. The missionary traveller, James Backhouse, a minister of the Society of Friends, spent a long time in Australia between 1832–40, partly in what is

¹ A. W. Howitt in “*Journal Anthropological Institute*,” vol. xvi, p. 23, &c.

² R. Brough Smyth, “*Aborigines of Victoria*,” Melbourne and London, 1878, vol. ii, Appendix B.

now Victoria. In his journals he recognizes the well-known spirit-beliefs of the Australians, but declares that they have no distinct ideas of a Supreme Being. William Buckley, the "wild white man," who lived thirty years among the natives of the district, till he had forgotten English, and describes their notions of demons and of becoming white men after death, says the same. The Rev. L. E. Threlkeld, the first grammarian and lexicographer of New South Wales, mentions the bush-deity, Koin, who controls the native mysteries and teaches the sorcerers, also other demons; but there was no being known to the natives whose name he could adopt as representing Deity.¹

If then Baiaame, unknown to well-informed observers till about 1840, suddenly appears then with markedly Biblical characteristics, the natural inference is that he arose from the teaching of the missionaries. Ridley himself has published, in his volume of Kamilaroi vocabularies, an extract from a missionary primer prepared for the Kamilaroi people, which begins with, "Baiaame verily man made" (Baiaame gīr giwir gimobi), and ends with, "Baiaame verily heaven, earth, the great water, all, everything made. Baiaame always is Baiaame" (Baiaame gir gunagulla, &c.). Mr. Ridley's evidence is not the less valuable from his treating the word and idea of Baiaame as native. He says, "In the ancient and still preserved creed of the Murri—'He who built all things is Baia-me.'"² The evidence points rather, in my opinion, to "Baiaame" being the missionary translation of the word "Creator," used in Scripture lesson-books for God, so that when the native Bonaparte explained to the Moravian missionaries that Baiaame was up in heaven, and made all things, and was Father, he was merely repeating the very words he had been taught by other missionaries in his own part of the country.

Mr. Howitt, in his papers on the mysteries and other religious rites of the Australians in the south-east region of the continent, records especially the native ideas as to the deities known as *Daramūlun* and *Bunjil*. These beings are like ghostly chiefs, or headmen of tribes; they are the legendary institutors of the initiation ceremonies and other customs, over the due keeping up of which they watch, severely punishing infractions.

Daramulun, whose name Ridley interprets = "leg on one side," or "lame," takes the ghosts to the sky, and it is consistent

¹ James Backhouse, "Narrative of a Visit to the Australian Colonies," London, 1843, p. 555, 506. J. Bonwick, "William Buckley, the Wild White Man," Melbourne, 1856, p. 40. John Morgan, "The Life and Adventures of William Buckley," Hobart, 1852, p. 57. L. E. Threlkeld, "An Australian Grammar," Sydney, 1834; and Key.

² W. Ridley, "Kamilaroi, and other Australian languages," Sydney, 1875.

with his heavenly abode that it is he who makes the thunder; and, indeed, his thunder is heard in the whirring noise of the "bull-roarer" sounded at his mysteries.

Bunjil lived when on earth at the Falls of Lallal, he went up to the sky in a whirlwind, and is there still as the star Fomalhaut. In all this there is much that is probably native, not foreign, and consistent with Mr. Howitt's view that Daramulun and Bunjil are originally beings of the nature of divine ancestors, dead headmen who still act with benevolent and malevolent power over their tribesmen. When, however, with reference to them the terms Great Spirit or Supreme Spirit are used, this may be accepted as expressing their actual position in the native Australian mind, which it is Howitt's task to represent. but there are reasons to show that they only attained this divine eminence under Christian missionary influence. This is to my mind involved in Howitt's finding them treated as corresponding or equivalent to Baiame, the Creator, whose origin I have just been discussing.¹

The manner in which missionary teaching has shaped native belief in a Supreme Being comes even more plainly into view when we notice the geographical position of the tribes who use names equivalent to the appellation "Our Father," a term which the missionaries of course have been for many years teaching them, and which is now found current in tribes differing extremely in language, as if it had radiated through the whole group from one missionary centre. The Kurnai, we learn from Howitt, have only the name *Mungan ngaur*, i.e., "Our Father," for their deity, who is the same as Baiame, or Bunjil, or Daramulun in other tribes. Within the very distinct Kamilaroi group of tribes, it appears from Mr. Dawson's account that the good spirit *Pirnmeheaal*, who is kindly, and lives above the clouds, and whose voice is thunder, but whom the missionaries have made the natives afraid of, is also known as *Mamyungrak* (mam=father), while other tribes appear like the Kurnai to have no name for God or the Good Spirit but *Peep ghnatnæan*="father ours." In giving these details Mr. Dawson is quite alive to the borrowing of such religious words and ideas from the white men.² On the other hand the passage just quoted shows that the natives now declare that they believed in Pirnmeheaal as kindly before the missionaries gave their people fear of him. So it is said that Daramulun not only taught the black fellows their arts and presided over their sacred ceremonies, but was called by the

¹ A. W. Howitt, in "Journal Anthropological Institute," vol. xiii, p. 185, &c.; vol. xvi, p. 23, &c.

² James Dawson, "Australian Aborigines in Western District of Victoria," Melbourne, 1881.

women *Papang*, "father," before the time of the white men, and that Bunjil was called *Mamingata*, "our father," before the white men came. These assertions must be recorded for what they may be worth. Among tribes who, as among the Kamilaroi group reckon kinship on the mother's side, it would be remarkable and requiring explanation if the name of father were given to a native divine ancestor of all men, but before arguing this point we should have the right to demand first some record of the name being known at all to the natives before the white transformation, as I may call it, of the native religion.

Space prevents my attempting to discuss here the whole list of names of dominant good or evil deity which appear in books within the last forty years. Unless the etymology of such names is known, they are not instructive. But as to dominant evil deity, it is worth while to mention two cases where the etymology is known. The word *murup* for the soul or ghost of a dead man belongs to the Woiworing and other tribes of the Kamilaroi group. Howitt gives a native account of a *murup* come back from the sunset land of the dead, to wander on earth; coming in sight of the grave it cries out, "Hallo! there is my old 'possum rug; there are my old bones." The word has, by talk with the white men, grown into a term for a bad spirit, thence into an individual name for the great bad spirit, till it now stands in the Western Victorian vocabularies as *Murup* = Devil, who also appears as "Maker of bad-smelling smoke," and lives, surrounded by a host of devils, in a place called *Ummekulleen*, that is to say "no good," where he punishes the wicked. So elsewhere, *tulugal*, "of the dead, ghost," has become *Tulugal* = Devil. These transformations have accompanied a corresponding change in ideas of the fate of the soul after death. The older native ideas of souls departing to some island, or into the western sky, and from time to time returning as ghosts to earth, and of their being re-born and coming from their distant homes in the bodies of strange peoples, Malays or English, have now given place to imported ideas of moral judgment and retribution after death. Baiame, the Creator, takes the good into heaven; Mirirul, the Creator, in the Illawarra tribes, judges men, taking the good to the sky, (mirir), but sending the bad to another place to be punished.¹

From the Australian we may proceed to the Tasmanian religion, which offers interesting considerations from the present point of view. The evidence has been so carefully collected in Mr. Roth's recent volume that the record may be taken as practically closed, the task remaining of comparison and criticism to ascertain what may be accepted as genuine native

¹ See the vocabularies *r* 'ready referred to.

belief, and what rejected as due to foreigners' influence or set down by mistake. Considering how superficial was the information of several contributors, it is perhaps remarkable that it can be reduced to so much consistency.

There can be no question as to the general animistic scheme. The belief in shades or ghosts, and their continuance after death, when they become protectors of their living relatives; the fear of hostile spirits in the night; belief in demoniacal possession, in nature-spirits thronging the world, and in certain greater spirits who may be described as gods, all this is well vouched for, and corresponds with the belief of savages elsewhere. As no one even suggests that the Tasmanians had any thought of retribution after death, the absence of this doctrine may be taken for granted. The present question touches what is said of belief in greater spirits or gods, whether any such approaches the definition of a Supreme Being or God, or of a Devil. Milligan in one account says that they considered one or two spirits to be of omnipotent energy, but that they do not seem to have invested even these with attributes of benevolence. The apparent strength of this statement, however, is much reduced by comparison with his other account, that they were polytheists believing in a plurality of powerful but generally evil-disposed beings inhabiting the mountains, &c., of whom a few were supposed to be of great power, the majority being like our goblins and elves. Again, Leigh and Jefferys (one of whom repeats from the other) declare that the Tasmanians believe in two spirits, the good spirit who governs the day, and the evil spirit who governs the night; and when any of their family are on a journey they sing to the good spirit for their protection. It is, however, stated on the better authority of Milligan that it is to the spirits of departed relations that they look for help, the great spirits not being benevolent, so that probably Leigh and Jefferys were mistaken as to whom the chant was addressed to. Backhouse says they attribute the strong emotions of their minds to the devil, but it is not clear that by the devil they meant anything more than a spirit. He remarks also that these people have received a few faint ideas of the existence and superintending providence of God, but in support of this vague suggestion he offers no evidence.

On turning to accounts which can be tested by the Tasmanian vocabularies, it appears that some statements as to spirits or gods are ratified by language, and some not. Robinson declares that the natives believed in the existence of both a good and an evil spirit; the latter they called *Raegoo wrapper*, to whom they attributed all their afflictions, and they used the same word to express thunder and lightning. In the vocabularies the name

for evil spirit, &c., appears in less grotesque spelling as *laguer-röperne*, *rargeropper*, *rediarapa*, *riggaropa*. Beside this, I place another statement, by Davies, that the natives believe in the existence of an evil spirit, called by some tribes *Namma*, who has power by night, of him they are much afraid, and never willingly go out in the dark. I never could make out, Davies adds, that they believed in a good deity, for although they spoke of one, it struck me that it was what they had been told; they may, however, believe in one who has power by day. Comparing this again with the vocabularies, it appears that *nowam* or *noamma*, is actually Tasmanian for thunder, while in another dialect *Namma* and *Namneboorack* are actually identified with *Riggaroppa* as names of the devil or spirit of evil. This evidence is conclusive that the native deity whom white men taught the Tasmanian to identify with the devil, was really their spirit or god of thunder and lightning, and a harmful being, of whom the natives went in terror. On looking through the vocabularies for mention of any deity regarded as good or supreme, I find only in Milligan's own vocabulary, *Tiggana Marrabona*, given as equivalent to spirit, of great creative power. Had Milligan thought this to indicate a native doctrine of a Supreme Being he must have said so in his accounts of their religion. The whole evidence for a Tasmanian supreme good spirit is in my opinion worthless.

So far as I can judge, such criticism of accounts of savage theology as has been here employed, while tending to remove as foreign any doctrines approaching full monotheism and dualism, moral government, and future retribution, leaves untouched in the religions of the lower races the lower developments of animism, especially the belief in souls and their continuance after death, manes, demons, nature-spirits pervading the world, and reaching their fullest expansion in great polytheistic gods. The present argument is, however, abundantly enough for consideration by itself, and there is advantage in not entering here upon a field of theory where opinion may be divided, but remaining on ground which every school of thinkers will agree needs thorough exploration and clearing for further operations. Though no attempt is here made to go beyond some typical cases of the blending of religions of different stages of culture, it has, I trust, become evident that the enquiry they involve is of importance. While anthropology, as regards the collection of materials for study of the religions of the world has gained of late vastly, the time has come for a more thorough criticism of these materials, so as to separate in the religions of the lower races the genuinely early and native part from the accretions and

transformations due to contact with civilized foreigners. By such examples as those brought forward, it will have been seen that there is a serious clearance to be made. It must not only be admitted, but made known as widely as possible among students both of language and religion, that the means for fully settling the relation between the religions of the less and more cultured peoples are not at present complete, and can only be made so by further investigations in the dialects and beliefs of savages and barbarians. These two kinds of work complete and correct one another in forming a solid foundation on which the anthropological theory of religion must be permanently built.

DISCUSSION.

Mr. S. H. RAY said:—In his instructive and interesting paper Dr. Tylor has brought forward many curious illustrations of the misapprehension of savage religious terms by those who have to provide for them a Christian literature. As Dr. Tylor's examples are drawn from the languages of America and Australia, it may be worth while to give a few examples of similar mistakes in expressing ideas foreign to savage minds by the use of native words, which I have found in the languages of Oceania. What is specially to be noticed in the Oceanic terms is, that they are not always the names of spiritual beings, as in America and Australia, but in some cases denote material objects.

The nearest approach to the American "*Manitou*," which is to be found in Oceania, is the Polynesian term "*Atua*," which originally meant "a god, a spirit," and is now used in missionary literature for "God, the God." In the latter sense *Atua* has been introduced into the languages of Efate and Malekula, New Hebrides. There, of course no objection can be made to its use, as the term is entirely foreign to the languages.

In the language of Nguna, or Montague Island, New Hebrides, the word used for "God" is "*Suge*." In a paper on "Religious Beliefs in Melanesia," read before the Institute (*Journal*, vol. x), Dr. Codrington described the *Suge* of Banks' Islands as a club or society of which the members were arranged in distinct grades. Position in this club determined to a great extent the position of the individual in native society. The highest places were only reached after considerable expense, and depended chiefly on the goodwill of the members, but also, to some extent, on a supposed possession of supernatural power. Thus the *Suge* wielded considerable influence over the lower sections of the community. In Pentecost Island, New Hebrides, Dr. Codrington describes *Sugematua* (a kind of Melanesian *Σαβάνης*) as a spirit who was continually doing, and proposing to do, things in a wrong way, when *Tagar*, the Creator, was doing them properly. In Leper's Island *Suge* carried his disagreement with *Tagar* to such an excess that

Tagar paddled away and left *Suge* to his own devices. Since then things have been continually going wrong. It seems probable that the native notion in Nguna is, that *Suge* is responsible for the condition of everything as it now exists, and the missionary seeking a native name for God, as the primary cause of all, has adopted the word *Suge* to express his idea of Creator.

In Iai, the Melanesian district of Uvea, in the Loyalty Island, by a somewhat similar misunderstanding, the word for "evil," with a slight change of sound, has been used for "God." In that language the equivalent of the adjective "bad," or "evil," is *kong*. Things which are bad are naturally things to be dreaded, hence the word was taken to be also the name of an evil spirit. It is by no means clear even that the natives had any conception of one specially evil spirit; their religion, as in Lifu and other islands of the group, consisting probably in a belief in good or bad influences associated with various objects. Finding it impossible to procure the abolition of the word *kong*, expressing the object of dread, the matter was compromised by substituting the guttural trill (written *kh*, and called by Dr. Codrington the Melanesian *g*) for the *surd*. Thus in the New Testament *khong* appears as the equivalent of the English "God," and we have in Luke iv, 34, the contradiction—"At ae kap ge *khong*," "the man that is holy (*tapu*) of *Khong*."

Perhaps the most curious mistake is to be found in the language of the Western Tribe of Torres Strait. In an account of these people in the *Journal* of the Institute for February, 1890, Professor Haddon refers to the *augud* or totem by which the clans on the Island of Mabuiag were distinguished. The men wore the totems (crocodile, snake, shark, &c.) cut or tattooed on the right shoulder, the women had them cut on the small of the back. In a translation of the Gospel of St. Mark made for the Western Tribe by (probably) a native teacher on Saibai, we find *Augud* used for "God," and in the opening verse read "*Senabi mina kapu zagital Jesu Keriso-inö, Augadan kazi*," "This (is) writing good things done of Jesus Christ, Augud's son."

Other examples could easily be found of similar mistakes in the use of words adopted for religious expressions in the languages of savage tribes. From a philological point of view the subject opened by Dr. Tylor is one of very great interest. To the missionary, or would-be missionary, it is of fundamental importance to the real success of his work.

Mr. DISTANT said: It seems likely that we shall never really understand the religious or speculative ideas of so-called savages, until we commence the study of the opinions held on these matters by the masses at home. What is the idea of the "Great Spirit" among the savages (to use a misleading word usually applied to other races) found in our own great cities; and would it not be better to commence the study in Whitechapel rather than proceed at once to Africa or Australia? Among the South

African Bantu Kafirs I have lately visited, I found the majority ready to believe anything and everything told them by their elders, whilst the chiefs, who are always more intellectual, sometimes exhibit a healthy scepticism. Is it not just the same in England, and would not the enquiry proceed much more rapidly if we investigated at first the crude and often simple ideas held on these matters by our own people, and thus be better able to formulate a method of enquiry to be applied to other races.

NOVEMBER 24TH, 1891.

E. W. BRABROOK, Esq., F.S.A., *Vice-President, in the Chair.*

The Minutes of the last meeting were read and signed.

The following elections were announced:—

The Most Hon. the Marquess of BUTE, K.T., of Cardiff Castle.

GEORGE A. KENNEDY, Esq., of 10, Seedley Terrace, Pendleton, Manchester.

WALTER F. CUNLIFFE, Esq., of Inverness Terrace, Hyde Park.

HERBERT WARD, Esq., of Shepherd's Hill House, Harefield, Uxbridge.

ARTHUR J. EVANS, Esq., F.S.A., of Holywell, Oxford.

The following presents were announced, and thanks voted to the respective donors:—

FOR THE LIBRARY.

From the SECRETARY OF STATE FOR THE COLONIES.—Despatch from His Honour the Administrator of British New Guinea, reporting visit of inspection to the Louisiades and neighbouring islands. Fol. 1891.

From Dr. P. L. SCLATER.—*Esayo Etnológico sobre los Aborígenes del Estado de Antioquia en Colombia.* By Andres Posada Arango. 8vo. Paris, 1871.

From Dr. L. STIEDA.—*Materialien zur Anthropologie des Kaukasus.* By Dr. N. W. Giltshenko. 8vo. 1891.

From the AUTHOR.—*Congress russischer Naturforscher und Aerzte in St. Petersburg, 1890.* By Dr. L. Stieda. 4to.

—Th. Koeppen: *Beiträge zur Frage nach der Urheimath und der Urverwandtschaft des indo-europäischen und des finnisch-ugrischen Volksstammes.* By Dr. L. Stieda. 4to.

- From the AUTHOR.—Examination of a Theory of the Mental Constitution. By C. Staniland Wake. 8vo. Chicago, 1891.
- L'Homme dans la nature. By Paul Topinard. 8vo. Paris, 1891. Woodcuts.
- Der Gaumenwulst. By Prof. Dr. Ludwig Stieda. 8vo. 1891. Plates.
- Fragments of the History of a Lost Tribe. By Dr. Lorenzo G. Yates. 8vo.
- From the METEOROLOGICAL OFFICE.—Bidrag till Kännedom af Finlands Natur och Folk. H. 49. 50.
- From the ÉCOLE D'ANTHROPOLOGIE (Paris).—Revue mensuelle, 1891. No. 11.
- From the GOVERNMENT OF PERAK.—The Perak Government Gazette. Vol. iv. Nos. 31, 32.
- From the STATE BOARD OF HEALTH (Massachusetts).—Annual Report. 1890.
- From the ACADÉMIE DES SCIENCES DE CRACOVIE.—Bulletin Internationale. 1891. Nos. 7, 8. Rocznik zarzadu. 1888. Pamietnik Wydziału matematyczno-przyrodniczego. T. xvi, xvii. Rozprawy Wydziału matematyczno-przyrodniczego. T. xix, xx. Zbiór wiadomości do antropologii krajowej. T. xiii.
- From the EDITOR.—Buletino di Paletnologia Italiana. Tom. 5 a 7.
- Nature. Nos. 1150, 1151.
- Revue Scientifique. T. xlviii. Nos. 20, 21.
- Science. Nos. 451, 452
- From the ROYAL ARCHEOLOGICAL INSTITUTE.—The Archæological Journal. No. 191.
- From the AUSTRALIAN MUSEUM.—Records. Vol. i. No. 9.
- From the SOCIETY OF ARTS.—Journal. Nos. 2034, 2035.

The Secretary read a paper by Mr. H. MITFORD BARBER on "Perforated Stones of South Africa."

Mrs. CAREY HOBSON, Mr. DISTANT, and Mr. WALHOUSE joined in the discussion.

A paper on "The Indians of the Similk'ameen, British Columbia," by Mrs. S. S. ALLISON, was read.

The CHAIRMAN and Dr. LEITNER took part in the discussion.

The PERFORATED STONES of SOUTH AFRICA.

By H. MITFORD BARBER.

THE perforated water-worn stones of South Africa, commonly called "Bushman stones," are found in various localities, frequently at a depth of twenty feet below the surface, often

mixed with other water-worn boulders in the beds of rivers and other places. One of these perforated stones was found in the Kimberley diamond mine, at a depth of about forty feet. They are not confined to certain localities, but occur, one may almost state, everywhere, although in some parts they are more numerous than in others. Their usual weight is from two to six pounds, more or less; they are not always round, but nearly so.

There has been much speculation and conjecture as to how these stones were perforated, and also for what purpose they were used: they are intensely hard, and drilling the holes must have been a work of considerable labour. Some have supposed that they were used for giving weight to digging sticks; the traveller Burchell mentions the digging stick in his book; others imagined them to be pipes for smoking Indian hemp (*cannabis Indica*), whilst some even go so far as to believe that they were made and used by the Bushmen, but for what purpose they do not state. This is, however, very improbable. The idle erratic Bushman, with his wandering thriftless habits, living upon roots, or passing through the country in search of game, ostrich eggs, &c., or following the locust swarms for weeks together, living upon them, and sleeping where they sleep day after day, through storm and sunshine, was not the man to devote hours of labour to this work; neither would he carry them from one part of the country to another. However, there can be no doubt that these stones were like all other utensils, used for a particular purpose, especially in those early days when work was not a labour of love. Of their great antiquity there can be no doubt from the positions in which they have been discovered.

The natives that inhabit the mountainous regions beyond Leydenburg, and the neighbourhood of Pilgrims' Rest and Mac Mac (which was formerly a place where alluvial gold was sought, in eastern South Africa) are for the most part an exceedingly mixed race, consisting chiefly of Shangaris and Basutos. These people are celebrated in their country, which abounds in exceedingly rich iron ore, as workers in iron, which is one of their chief industries. Many of them are clever at their trade, although their manufactures are of the rudest nature. The forge and the bellows, however, are not only curious but very ingenious contrivances, the last named being made of the hide of the Sable antelope. The skin is taken whole from the body of the animal, the skinning commencing from the hind quarters and finishing at the neck, where it is severed just below the head. All the incisions are carefully and neatly stitched to prevent the escape of air, the skin is then made soft and

pliable, and an incision is made in the centre of this bag of about six inches in length; on each side of this aperture a piece of strong stick is inserted of the same length on each side, with a loop of hide attached to admit of the fingers and thumb of the blower, each hand working a separate bellows. The tube or blow-pipe of the bellows is made of the long bent horn of the antelope, with the apex cut off below the natural hollow part of it, the large end or base of the horn is firmly affixed to the neck of the bag, but placed slightly on one side. When the whole thing is finished and ready for working, the pair of bellows are placed in position in front of the forge, which simply consists of a low semi-circular wall made of clay, in the centre of which are placed side by side two of the above-mentioned perforated stones; they are usually built into the clay wall, where they remain as fixtures.

The pair of bellows are placed immediately in front of the forge, and six or eight inches apart, with the nozzle of each placed in the apertures of the perforated stones, the nozzle not extending further than the middle of the stone, which is the narrowest part of the hole. It will be seen that by this arrangement the stone is of the greatest value in preventing the horn from being injured by the heat of the charcoal. The blower, or worker of the bellows, takes up his position by kneeling between the two and by placing a hand in each bellows, opening and shutting the valves alternately in the centre of the bag by pressing up and down, and thus inflating it. The anvil is simply a heavy flat stone. The hammer is an oblong piece of iron with a hole in the centre for the insertion of a rough wooden handle.

DISCUSSION.

Mr. WALHOUSE remarked that the bellows for the furnaces described in Mr. Barber's paper almost exactly resemble the bellows used for the native iron-fusing furnaces in Southern India, such as have been immemorially used in making the "*wootz*," or Indian steel, the nature and manufacture of which had long been a perplexity. In India bamboos are used for blow-pipes instead of horns as in Africa; the double bellows are worked by two men, one at each, for at least two hours before the ore fuses.

ACCOUNT of the SIMILKAMEEN INDIANS of BRITISH COLUMBIA.

By MRS. S. S. ALLISON.

OF the origin of the former inhabitants of the Similkameen I know nothing, but of the tribe at present occupying the valley tradition relates that about 150 years ago a small band of the warlike Chilcotins, accompanied by their wives and decked in their war paint and feathers, crossed the Frazer River on the war path to avenge a wrong (the death of a chief) inflicted on them by the Shuswaps of the Bonaparte and Thompson.

Penetrating too far into the interior the winter suddenly set in, they found their retreat cut off and themselves hemmed in by their enemies. They were, however, in a country abounding in game of all kinds, which, together with the long black lichens that descended from the pine trees, afforded them ample sustenance.

Establishing themselves in the upper valley of the Similkameen they manfully faced the rigours of the winters, and bravely held their own against their foes. Making friends with the Spokans (who admired the fairness of their women) they inter-married with that tribe and increased in numbers for many years till, in common with all the neighbouring tribes, they were nearly obliterated by that dire scourge, small-pox. Since that time civilization has nearly finished the work begun by small-pox, viz., the extinction of the tribe. Whether this is due to the entire change that has taken place in their food and manner of life it is hard to say, but I know from personal experience that the Similkameen Indians of to-day are totally different both physically and mentally from what they were thirty or even twenty years ago. Though the women are of small stature (possibly from the custom of marrying them before they have attained their full growth) the men average five feet six in height; their frames are lithe and muscular, their movements quick and graceful.

In complexion they are very light, being more of the yellow paleness of the Chinese than the copper colour of the Red Indian, and like the Chinese they have small hands and feet. Their hair varies from jet black to red brown, and in some cases there is just a glint of gold in it; many of them have a kink or wave almost amounting to a curl in their locks, of which they are very proud. Formerly they were hardy and enduring, and capable of sustaining great fatigue. Before there was any regular means

of transport over the mountains lying between Hope, on the Frazer, and the Similkameen, the Indians used to be employed to pack provisions over on their backs. Their packs were suspended by means of a band or strap passed over their foreheads, and I have known some of them pack three sacks of flour (150 lbs.) on their back, while travelling on snow-shoes for a distance of 65 miles over a rough mountainous road, with a depth of 25 feet of snow on the summit of the Hope Mountain, over which the trail ran.

Sometimes a whole family would start out on one of these packing expeditions, the children, as well as their parents, each taking a load, and accomplishing the journey in six or eight days according to the state of the road. If an unusually violent snowstorm overtook an Indian while travelling in the mountains he would dig a hole in the snow, cover himself with his blanket, and allow himself to be snowed up; here he would calmly sleep till the snow had passed, then he would proceed on his journey. The Similkameens are not good runners, though I have known some of them when sent a message keep up a steady jog trot for ten hours and cover a long stretch, but they are not by any means swift-footed, nor do they develop pedestrianism. They are born horsemen; as soon as a child can sit alone it is placed on horseback, indeed before that it becomes familiarised with horses, for while a child is still bound on a "papoose stick," it is hung by a strap to the pommel of its mother's saddle, and away it goes flying with her over the bunch grass hills, and they thus make good riders with firm, easy, graceful seats. As they depend on hunting for a large portion of their food they are, of course, good shots. They now use the same weapons as the white settlers—Winchesters, .44 bore generally, Ballards, Remingtons, and Henry rifles. Formerly they used bows and arrows, lariats, and snares.

Deer were often snared; two saplings growing in a convenient spot on either side of a deer run were selected and bent down, and a noose suspended between their tops; the deer were then driven down the run by men and dogs. The frightened animals bounded heedlessly along till they came to the snare, where they were quickly involved in the noose, releasing in their struggles the bent saplings, which, springing into their natural position, hung the deer thus caught. At regular times in the autumn the whole tribe would assemble, and scouring the country for miles with their dogs, would drive large herds of deer into some mountain *cul de sac* where the hunters with their bows and arrows were stationed beforehand, ready for the wholesale slaughter of the bewildered creatures.

Deer were often pursued on horseback and lassoed with a

strong reata. I have been told by an old man of the tribe that the sharp horns of the mountain goat fixed on shafts of hard wood were formerly used as spears both in hunting and warfare, as also stone knives and hatchets. I have seen the rude flint arrowheads used in past times, also a stone chisel. Some ten or twelve years ago an Indian who was in need of an axe, but too poor to buy one, made himself a very serviceable one of stone, the same he said as his father had used.

In pursuing deer, sheep, or goats, the Similkameens used a species of dog crossed with the wolf or coyote (the wolf making the best cross, the result being a braver, fiercer animal, while those crossed with the coyote had more of the cowardly, slinking nature of that cowardly creature); these were fleet, strong, and highly prized by their owners. In early times the women were nearly as good hunters as the men, but since they have grown civilized they have given it up lest the white settlers should laugh at them, for they are highly sensitive to ridicule.

Before shot guns were plentiful among the Indians, birds were snared in slip nooses set in the trees they frequented. The fool bird (a species of grouse quite deserving its name) was caught with a loop tied to the end of a long pole; the loop was thrown over the bird's head and just "yanked" off the tree or bush on which it sat.

Fish were caught in the Similkameen and its tributaries in basket traps and by horse-hair lines with thorn or cactus hooks attached. The fish were also caught in nets placed across a stream; these nets were formed of twine made from a native hemp which the women gather, beating out the fibre with stones and forming a twisted thread or twine by rolling it with their hands on their bare thighs. It is rather a comical sight to see a group of women manufacturing twine; this twine is strong, and is used for many purposes.

Before matches found their way to these Indians fire was produced by inserting a piece of hard wood into a punk, stump, or log, and twirling it round between the hands until the friction induced combustion. The inconvenience of kindling fires in this manner made the Indians chary of allowing their fires to be extinguished.

I cannot learn that there was any particular significance attached to fire (though it was the medium through which offerings were made to the dead), but they have some tradition of an underground fire.

I have been told both by an Okanagan and a Similkameen Indian of a river that is said to be somewhere in the mountains that after a rather turbulent course, leaps over a high precipice and sinks into a deep hole that goes down into the earth till it

reaches "kee-kee-lee fire" (underground fire), and steam or smoke, as they call it, ascends from the hole—the river is here lost. Neither of the Indians who told me the story had seen the place himself, but both said their fathers had seen it; they were both old men, and, as far as I could learn, were not acquainted—they both, however, told the same story. The other Indians knew nothing of this river, but said the old men had heard of it from their fathers. This may have been a tradition brought with them from their old home, or it may have been a lie manufactured for the amusement of their friends.

As I have before remarked, the Indian of to-day and the Indian of former years are altogether different beings; their food to-day is the same as ours, or rather they live more luxuriously than any poor white settler would think of doing; they will not do without tea, coffee, sugar, flour, sago, rice, jams, jelly, canned fruit, in fact all that is good. Formerly their food consisted of venison, fresh and dried game of all kinds, beaver tails and bears' paws being esteemed a dainty. The seeds of the sunflower pounded furnished a sort of flower that was made into cakes. The root of the speetlum (a plant resembling portulaca) was dug in the spring and eaten either boiled with the bark of the service berry, which imparts an almond flavour, or dried; when dried it made an excellent substitute for bread. The cactus, or prickly pear, was roasted and eaten with meat. The stitome (a sort of wild potato), a root growing abundantly in wet land, was gathered in its season. Various edible fungi growing in the earth or in the woods were much used. The long black lichens on which the deer feed were gathered and soaked for a long time in the river; a pit was then dug and lined first with a layer of hot stones, over these a layer of green branches was placed; the wet lichens were then put in the pit, and covered with another layer of green branches, and more stones and weeds; the whole was then earthed over. When the pit was opened some days later the lichen was found run into substance resembling india-rubber in taste and tenacity; this was cut into cakes; it is not much wonder that the delicacy was given up. The berry of the milshettleman (or nic-a-nic) was called ike, and when dried and pounded was used as sweetening, and no doubt it tasted sweet to people unacquainted with sugar. The nic-a-nic or kinnekinic is an evergreen creeping plant with a brilliant red berry. Though the berry is no longer used as sugar the leaves are still dried and smoked when tobacco or the money to purchase it is scarce.

The wild onions are still dug and cooked in pits in the

manner similar to the mode of cooking lichens. There are numerous edible roots—the bulb of the tiger lily and a yellow snowdrop are much used—also a kind of celery. Lebine (?) is made from the soap berry, which is beaten with the hand in water till it forms a stiff froth resembling soap-suds—this is very nice. There is a tea they used to drink said to possess many virtues (very good for consumptives), which the Hudson's Bay Company tried to introduce into England under the name of Labrador tea. The service berry was a staple with the Similkameens. When the berries were ripe mats were laid under the bushes and the berries were beaten off them on to the mats; these were then dried in the sun; a portion was then reserved for home consumption, the rest were put in sacks made of rushes strung together by threads of wild hemp, and traded with either the Hope or Okanagan Indians for dried salmon or watertight baskets, in the manufacture of which the Hope Indians excelled. These baskets were used for boiling water or meat; the baskets were filled with water and hot stones thrown in till it boiled. To roast the meat was transfixed with stakes which were driven into the ground in front of their fires. The Hope Indians wove mats of cedar bark, and these the Similkameen Indians greatly preferred to those they made themselves with tule or rushes threaded on twine (also of their own manufacture) as they were stronger and did not harbour vermin. The summer dwellings were made of these mats thrown over a circular frame of poles. The winter houses were simply pits dug in the ground and roofed with poles and earth. A hole at the top afforded ingress and egress to the dwellers (a notched pole serving as a ladder or stairway); this orifice was also sole chimney.

These houses were known as kee-kee-lee (a Chinook expression), and were very dirty, unwholesome dens, harbouring every kind of filth and disease. After the last visitation, however, of small-pox, the Indians were persuaded to give up using them. It is now about twenty-five years since they built their first log cabin at their village of Chu-chu-ewa. This village now boasts a church and many good warm houses. The Similkameens to-day are Catholics, having been won over to that faith by the patience and long-suffering of the Oblate Fathers. Their old religion, as far as I can ascertain, was very simple.

They believed in an Almighty Spirit, the Creator of all things, and Master of all—Him they adored as the father: there were other spirits—the woods, mountains, water, and even fire were full of them, but they were subordinate spirits entirely under the control of "the Father," some of these subordinate spirits

were good and some evil. The spirits called Sonnie-app-ooos were not altogether as bad as their name indicates (devils); most of them seem to have been neutral. The old chief Tumisco (? Minisco) used to tell me of one he met with in Mount Cluppaco and Mount Baker (where he was hunting across the present boundary line). This Sonnie-appoo is described by Tumisco as being in form like a large black man covered with long, silky hair, and so strong that when once caught asleep by Tumisco and his followers, and by them bound to the ground by strong reatas, on waking he merely stretched himself and rose up with ease, snapping the thongs like threads, and shaking off the hunters who clung to him to hold him down, as if they had been mosquitoes, but doing them no further injury, though his scornful laughter as he eluded Tumisco must have been provoking. I have heard the Indians describe some Sonnie-appoos (that used to frequent a certain place in what is now our cattle ranch), as having the body of a man, the head of a deer, with a human face covered with deer's hair, the limbs were also those of a deer. From the shoulders sprung the wings of a bat, which seemed to vibrate in the air perpetually. These spirits were kindly rather than otherwise. The spirits most dreaded were the spirits of the dead, which the Indians imagine are very easily offended and very vindictive, even to their late friends. Their eyeballs gleam with baneful fire, and from their nostrils smoke proceeds, their appearance is altogether frightful, and they don't glide about like honest, Christian ghosts, but spin round and round as they advance to meet their friends, making the while the most unearthly noise; these frightful apparitions are generally appeased by a feast or potlatch, which I think is nothing more nor less than a feast in honour of the dead. The medicine man or doctor was a very important personage, and really not the entire humbug he is represented by those who merely give him a cursory glance.

Some of them have developed a strong magnetic power, and the extraordinary power they do exercise over their patients is due entirely to animal magnetism. I have not the least doubt of it, for I have seen many cases where they have really effected cures. The music they use is a sort of half drum resembling a tom-tom, and they kept up a low, monotonous chant while charming the evil spirit from their patient; sometimes a certain mat was used, and the spirit once beguiled on to it had to stay there till released by the doctor. All sickness was supposed to be the work of an evil spirit who fastened on a victim and hung on, drawing away his life till charmed away by the doctor, who worked himself into a state of perfect frenzy, singing and dancing while he was trying to lure the evil spirit

from his patient, and he would go through the motions of wrestling with some invisible foe, the sweat pouring from his body; he would fall down perfectly exhausted, or fall and roll over and over as if struggling with some powerful adversary. I have watched them from a little way off and am sure that if there is any deception it is themselves the doctors deceive. I think they are really possessed of the belief that they are struggling with some supernatural power. I have often seen a strong man so exhausted after six hours of doctoring that he could hardly walk.

In one case where the patient was consumptive (a prevalent disease amongst them) the doctor worked by suction, that is to say, he sucked a certain part of the patient's chest till he had made a hole through which he sucked portions of the diseased lungs and quantities of clotted blood, varying the operation by endeavouring to draw the "evil one" from his patient by dancing and singing; some white men who were present during the climax of his struggle with the "evil one," left the house in perfect horror, they said that the doctor was so terribly in earnest that it seemed impossible to doubt that he was fighting with some unseen adversary. Some of the doctors claimed to be clairvoyants also, if anything was stolen they said they could, by touching something that had been near the stolen article, find out the thief. They claim to be able to extract toads and other horrors from the bodies of their patients. Setting the mysterious part of the doctors aside, they have some really valuable medicines. I have seen people apparently in the last stage of consumption cured by them—it seems a pity they should have taken to "white man's medicines." For blood-spitting they use a decoction of the fibrous roots of the spruce. For rheumatism, the root of the soap berry (from which lebine is made), while the berry itself is considered an excellent stomachic. A decoction of swamp poplar bark and spruce roots is used in syphilis. The bark of the wild cherry is much used by the women, also tansy root.

The wild cherry is used both as a tonic and expectorant, and is good for consumptives. There is a plant resembling the anemone, the root of which when bruised makes a powerful blister; and another resembling the geranium, the root of which will cure ringworm and dry up an old sore. The inner bark of the pine is used early in spring when the sap is rising; the tree nettle is used as physic, also as a wash for the hair, which it renders thick, soft, and glossy. Wild strawberry acts as an astringent; it would take too long to enumerate the different herbs used by these Indians.

Their chief panacea for all ills is the sweat bath; this is

nothing more than a hole dug in the ground and covered by a conical roof formed of green branches and earth, a small aperture is left in the side for the bather to crawl into; a fire is built outside, and a number of stones heated—these, when sufficiently hot, are placed in the sweat house; the bather then crawls in, taking with him a small kettle of water; closing the orifice, he drops the water gradually on the hot stones, till the house is filled with steam and heat; this he endures as long as possible; when he can stand it no longer, he rushes out and plunges into the cold river; the performance is repeated three or four times, according to taste. When the doctor cured, he was paid in blankets, horses, or cattle, according to agreement; but when unsuccessful, he often had to pay for it with his life. The doctors were often employed as mediators between the living and the dead; that is to say, when an offended ghost disturbed its late friends by unseemly scratchings and knockings the doctor was employed to enquire into the matter, and having ascertained the cause from the perturbed spirit, informed those whom it might concern. The general cause of trouble between the living and the dead being some neglect or slight to their memory; to appease the poor wandering spirit it was often necessary to exhume its late habitation. The disinterred bones were then carefully gathered together, each relation in turn lifting a bone from out of the mass of corruption, and placing it as nearly as possible in its proper place, on a clean new robe or blanket (the head being placed at the top, the rib bones in the middle, and the feet at the foot), clean new clothes were laid on the bones, the old weapons, if in good condition, restored to place, the whole being once more wrapped up and laid in the tomb; during this operation, the chief actors had their noses and ears stuffed with sweet-scented grass. When an Indian died, he was laid out in state on a couch of skins—everything put on the body was new—his bow and arrows were laid at his side along with his knife, his friends then assembled around him to feast—a portion of the feast reserved for him was burned, as also certain gifts and offerings, such as calico, clothing, &c.; when the feast was over, his friends advanced, and, taking his hand, bade him farewell. There was rather an amusing story, current some years ago, of a young man who bore little good will to a deceased chief, expressing an uncomplimentary wish while shaking hands with his corpse, when, to the horror of those present, and the young man in particular, by some relaxation of the muscles, the dead man's hand closed on that of the living man, who tugged in vain to free himself from the vice-like grasp, and had finally to be released by his friends forcing open the dead chief's

hand; the young man was so terribly frightened that he afterwards dwindled to a mere skeleton, and the doctor had hard work to chase away the evil spirit that, quitting the chief's corpse, had fastened on him. Immediately after a funeral takes place, the encampment is moved, lest the spirit of the deceased should revisit it; the friends next go about enquiring into the debts of the deceased, which are promptly paid, no matter of how long standing they are; the near relatives cut their hair and shave their eyebrows, and go about singing a low, wailing chaunt, in which the name of the deceased is very prominent. One strange custom is that a widow or widower is forbidden to eat meat and certain vegetables for a month, and must wear quantities of spruce bush inside their shirts, next their skin; this, I am told, is done to ward off the evil spirit now set free by the death of its victim, and ready to pounce upon a fresh one; it is also considered shocking for a widow to smoke for a month after the death of her husband. I was recently told of the death of a woman through neglect of these precautions, so that this superstition, at any rate, survives. A widow or widower invariably takes another spouse within three months. Carved figures representing the deceased were frequently placed on their graves; these figures were clothed in their garments, which when faded were renewed. Cannibalism was never known among the Similkameens, though at some of the potlatches a live dog was torn to pieces and devoured. This practice is now quite given up; but about ten years ago, while living on the Okanagan Lake, I observed a dog with a thong tied round its nose, and the nose attached to one hind leg drawing the body of the dog into an uncomfortable position; on enquiring the reason, I was told that there was to be a potlatch, and the dog was getting ready for that; they were ashamed to say that it was to be eaten. That was the last time I have observed anything of the kind. The Indians were in a state of wild excitement over Chief Joseph's troubles across the border, were holding nocturnal war dances, and for the time being had gone back to a good many of their savage customs. Belief in the immortality of the soul prevails, and the departed spirit, in some cases, is supposed to take up its abode in some bird or animal. They are particularly afraid of a white owl on that account. There is a small owl which is supposed to give warning of impending death by sitting on a tree and calling, "I come for you—for you." Also, when a coyote or dog howls in a peculiar manner, it is said to denote death. The rattle of a rattle-snake is considered both a preventive and cure for headache. Eating the heart of a bear inspires courage.

Certain herbs—also toads and snakes dried—have some occult virtue.

Some of the old women have great skill in brewing love potions, which, I am told, are in great request. A lock of a person's hair in the hands of certain women, gives the possessor control over the person from whose head the lock was severed. In the mountains there is a certain stone which is much venerated by the Indians; it is said that striking it will produce rain. Two years ago there was a bet between a Christian Indian, by the name of Wicam, and one of the few remaining heathens, about the striking of this stone; and it was agreed that if rain followed, the Christian should ride in the rain all day without any clothes on. As the weather was fine, and the sky cloudless, Wicam did not hesitate to agree to the heathen's terms; the stone was struck with a scoff at old traditions; shortly after the wind rose, the sky became overcast, and rain followed—not a little—but a week of steady, downpouring rain. The old heathen was triumphant. There is a place near Keremeos, where some large stones stand (possibly hurled down from the mountains by some earthquake), of which the Indians relate that some of their enemies coming to attack them were, by the power of a doctor, turned into stone.

There are numerous other stories that the old men are fond of relating while sitting round their camp fires. One in particular struck me (because the Chinese, whom they greatly resemble, tell a similar story of the mountains of Thibet). In the mountains there live certain huge men; these men are so large, that a deer, hung by its neck in their belts, looks no larger than a chicken would do in a man's—the earth trembles as it echoes their tread—they resemble white men with long beards, and seem to be kindly in disposition. They are sensitive to pain, and shed tears for a mere nothing—one of their favourite amusements is catching fish. An Indian affirms that he was once made a prisoner by these "big men," and although they kept a close watch on him, he was petted and kindly treated. Buckskins, which the women are expert at tanning, formerly formed their chief supply of clothing; both men and women were clad from head to heel in buckskin. These clothes were durable and variously ornamented. Beads obtained in trade from the whites, or dyed horsehair, or porcupine quills were used; the horsehair was dyed with ochre and roots; these garments looked remarkably nice. For shoes they used mocassins. The following process was employed in tanning: the deer's hide was first soaked in the river till the hair could be easily scraped off. It was then stretched over a pole and scraped with a bone, in the shape of a chisel, till all the hair was removed; the skin

was then beaten with a round stone till the fibre was thoroughly broken ; it was then rubbed with a mixture of deers' brains and wood ash, after which it was thoroughly manipulated till partially dry—a pit was then dug, in which a smouldering fire was started, a frame of poles was erected round the pit, the skin was wrapped round the poles, and a slow steady smoke kept up for some days—when removed, the skin was once more thoroughly manipulated, after which it was ready for use. It is a tedious process to make a good article, as it requires no end of elbow grease. Tobacco pipes are made from a soft stone, of a greenish-grey colour ; this stone is also an article of trade, the other tribes valuing it highly ; it is known by them as Similkameen stone. The pipes are very simple in form.

Red and yellow ochre is dug out of a cave or cleft in the bluffs of the Tulameen (north fork of the Similkameen). The word Tulameens means red earth or paint ; this is used both as a paint and as a dye. Buckskins were often painted with it, and the young girls, when arrived at a marriageable age, have a strange custom of painting their faces with it. The marriage tie was not particularly sacred or binding—a wife was generally purchased for a certain number of cows, horses, or blankets, according to the estimated value of the woman ; and if the husband or wife tired of each other, the price or its equivalent was returned by the woman's father or guardian ; the parties were then free to contract another matrimonial alliance, or if both parties were agreeable, wives were "swapped," and often boot given. I have known as many as ten horses given by an old man for a young wife, and when the girl eloped with a younger man, the disconsolate husband insisted on having not only the horses, but their increase returned. Another man gave a log house as boot in trading his wife. It was thought wicked for a man or woman to marry any of their mother's relations, but they might marry their father's relatives if they liked. A plurality of wives was allowed, two being the general ; old Spentlum had six ; he employed them rocking gold dust. Adultery was sometimes punished by cutting off the woman's nose, or splitting her ears ; though it was generally compromised by the other party doing likewise, or receiving compensation (usually horseflesh) from the offender.

In one case where the wife of a chief was carried off by an Indian of a kindred tribe, but living across the boundary line, the chief despatched a messenger with orders to ride after the runaway couple night and day, and take summary vengeance on the man and bring the woman back ; this order the messenger did not hesitate to perform most thoroughly, for on overtaking the rival of his chief he slew him, carved him up to his own

satisfaction, smeared himself from head to foot with his blood, and returned in triumph with the woman. This man was in ordinary circumstances a polite, kindly individual; he only obeyed orders. As the Indian thus killed was considered by his own kinsmen to be a very bad man, no revenge was taken but the minister of justice was warned to keep the British side of the line lest the American authorities should make it unpleasant for him. Husband and wife do not hold property in common, but each retains whatever they possessed before marriage, and also anything they may subsequently acquire. The strongest affection that an Indian seems capable of exists between father and son and mother and daughter. Slaves taken in war were well treated, but always had one eye blemished to mark them. The Similkameens will often prove their devotion to a dead relative in a most revolting manner. Once when a corpse was being removed from one burial ground to another, a friend of the deceased perceiving some drops oozing from the corpse instantly caught and rubbed himself with the loathsome exudation, in the belief that some portion of his late friend would become incorporated with himself. In another case, where a young woman died from rupture of a blood vessel, a portion of her blood remaining clotted on the floor, her mother gathered it up and swallowed it up in her frenzy of grief; afterwards when she reflected on what she had done she could not sleep or eat, but came to me for medicine to drive the horror she felt from her mind. This woman was a Christian, and usually kind and mild in disposition. The Okanagans of the lake did not originally belong to that locality, but came from Spokan and the Columbia; they drove the Shuswaps (a mild race) out before them. In the wars between these people it was a favourite practice of the victorious Okanagans to drive the defeated Shuswaps into their kee-kee-lee houses and then throw down fire-brands into the midst of them, killing those who tried to escape death by the flames. There were many cruelties practised by both the Okanagans and the Similkameens from kindness, and without the least idea of their being cruel. I was told once that one of the tribe was sick, so sick that he could not eat or move himself; but as he knew that the other members of his family wished to go hunting he told them to go; so the dying man was laid on a mat and covered over, face and all, with robes and blankets and left for a week. When his friends returned from their hunt he was dead. Then they went to a great expense to bury him. Another case that was brought under my notice was that of a young man dying of lingering consumption and thoroughly tired of life. One day his father came into the store and asked for grave clothes. I asked, "Is

Chilk-palst dead?" "No," replied his father, "but he wishes to be buried to-morrow, he is tired of waiting." And buried he was sure enough, some said before he died, others indignantly denied this when asked; the Indians are chary of mentioning such matters now, as they are amenable to the laws of the whites. I cannot, however, help thinking that such things are sometimes done now, and also that there is a good deal of infanticide practised among them. Chiefs formerly had the power of life and death, and did not scruple to use it. The late In-cow-la, who was head chief both of the Similkameens and the Okanagans, was a stern, just man, a friend to the whites, and feared by his own people. He used to execute justice in rather an appalling manner; the delinquent or delinquents, as the case might be, were lassoed and dragged at the heels of a wild horse till death ensued. When one man killed another, where summary vengeance was not taken, blood money was demanded. In one case five cows, several horses, and a hundred dollars was the price agreed on. Nevertheless the Indians have a strong sense of justice. An Indian who was dying from the effect of wounds received in a drunken brawl, called his friends together and told them that the fault lay with himself as he had begun the quarrel, and he was alone to blame for the consequences. He then made them all promise that the man who had inflicted the wounds on him should be held blameless, and also that they would defend him from "white man's justice." This promise made to the dying man was faithfully kept. Theft was punishable by whipping, though in some cases restitution was sufficient. The Indians are said to be great thieves, but I have not found them so; I have lived surrounded by them for many years, but as long as there were none but Indians near I never locked the house door; indeed, in summer the door was often left open all night, and no one ever disturbed me.

I have lived alone among these people for years (sometimes not seeing a white face for three months) and never met with anything but kindness; they have always been ready to help when any assistance was wanted, and on the alert to give warning of any danger. Some five or six years ago, when the Nicola Indians meditated a rising, an old Indian travelled fifty miles on foot to warn us and beg us to go, or at any rate send our children to Hope, out of danger. The Similkameen of to-day are a peace-loving people: indeed, they have too much property to wish for war, and they have frequently said that if trouble arose between the white settlers and any of the kindred tribes, they would go to the mountains and abide the event, as they would neither fight the whites or their own kinsmen. These Indians are proud and independent. They will accept

nothing from the Government; though they have been offered agricultural implements, they prefer buying them themselves. They have their own farms on the reserve, and employ white and Chinese labour; they disdain manual labour. They possess cattle and large bands of horses, hogs, and chickens; they are employed in driving cattle and in breaking horses. Formerly they were expert horse thieves. An Indian who was known to me boasted that he could steal any horse, the following occurrence took place. A man travelling through the country, not wishing to lose his horse, tied a long rope to it and slept on the end of the rope. The Indian, who had been watching for the horse, crawled up, severed the rope with his knife, then deliberately filling his mouth with grass, chewed the end of the rope left with the sleeper and quietly led the horse away. The traveller waking and examining the rope, imagined that the horse had bitten it in two itself and escaped. At the Indian village Chu-chu-ewa, there is a small church, and most of the Indians have comfortable cabins. They are every day becoming more civilized, and the time is not far distant (if they survive the civilizing process) when there will be little or no distinction between a Similkameen Indian and his white brethren.

DISCUSSION.

The CHAIRMAN remarked that original observations on the Indian Tribes in remote parts of the Dominion possessed particular value. The Government of the United States devoted considerable grants of public money towards researches on the Indian tribes in their territories. Mrs. Allison, without such aid, had furnished important information derived from personal observation during a long term of residence. Her remarks on the religion and superstitions of the people should be considered in the light of the paper read at the last meeting of the Institute by the President. For himself, the speaker thought the idea of a "Father of Spirits" was likely to be rather an adopted than an inherited one. The author's remarks in defence of the medicine men and of the character of the Indians generally appeared to him to be deserving of very careful consideration.

ANTHROPOLOGICAL MISCELLANEA AND NEW BOOKS.

On Crude Jadeite in Switzerland.

By A. B. MEYER (Dresden).

Mr. F. W. Rudler, in his review of the jade question (see this *Journal*, vol. xx, pp. 332-342) has not touched the finds of pieces of crude jadeite in Switzerland, published by myself in the years 1884 and 1885 (see "*Antiqua Unterhaltungsblatt für Freunde der Alterthumskunde*," Zurich, 1884, No. 9, pp. 121-127, and "*Mittheilungen der Anthropologischen gesellschaft zu Wein*," 1885, vol. xv, pp. 1-12), and on which I, therefore, beg to say a few words.

Two irregular pebbles of about 6 cm. length were sent to me from the lake of Neufchatel, and there can be no doubt that they are unworked material, rolled pieces, as found plentifully on the shore of that lake. The one was taken between Font and Cheires, where are several stone and bronze stations; it lay with many other pebbles in the mud and sand under water. The other was taken near the lake dwelling of Champréveyres, between this one and the village of St. Blaise, half-an-hour from Neufchatel, in the drift gravels. They showed the following composition:—

Sp. grav.	3·42	3·36
SiO ₂	52·42	50·30
Al ₂ O ₃	26·00	25·68
FeO	2·02	2·79
CaO	9·05	11·00
MgO	3·56	4·45
Na ₂ O	7·44	6·30
H ₂ O	0·20	0·40
	100·69	100·92

These finds prove that the ancient lake-dwellers got their jadeite material from the spot where they lived, where they also found the other material for their hatchets and implements, of which we now see thousands and thousands in our museums. This other material is partially likewise such one, whose recurrence *in situ* we do not yet know. No doubt we will not always be as ignorant, but this does not affect at all the jade question in Switzerland, as the lake-dwellers took the raw material as pebbles, as is proved by the fact that hardly one implement can be found where no traces of rolling occur; they were all manufactured from boulders.

Besides I have in my hands two small pebbles of *nephrite* from the Lake of Neufchatel, the one ca. 5 cm. long and 2.5 cm. broad, with the specific gravity of 3.02, the other ca. 4 cm. long, very irregular and smooth.

The occurrence of raw jade in Silesia (Germany), viz., near Reichenstein was already known to *Linnaeus* (*vide* the 12th Latin edition of *Gmelin*, Nuremberg, 1777. 8vo, vol. i, p. 458), and has only recently been re-discovered by *H. Traube*.

I am just preparing a paper on several rarer jade implements from Westphalia, Weimar, Sizilia, &c., in which I shall also describe a pebble of *nephrite* found on Heligoland, of a similar Scandinavian origin, doubtless, as are the blocks found near Potsdam, Leipzig, and Schwemsal.

To the President and Council of the Anthropological Institute of Great Britain and Ireland.

The World's Columbian Exposition, 1893.

A Department of Ethnology has been formed in connection with the Columbian Exposition, with Professor F. W. Putnam, Peabody Professor of American Archæology and Ethnology, Harvard University, and Curator of the Peabody Museum, as its chief officer. One object in appointing Professor Putnam to the head of the department was, that he might carry out as perfectly as possible an elaborate scheme prepared by himself for an exhibit illustrative of the different races of mankind, and displaying their industrial and art progress. Especial attention is to be paid to the ethnology of the American Continent, with reference particularly to its native population of the Columbian era and the pre-historic period. The early anthropology and civilization of the Mound Builders, and of Mexico, Central America, and Peru will be well represented, not only in the exhibit of the Department of Ethnology, but also in the separate exhibits of the present governments of those countries. Special expeditions are being sent to the Polar regions, to Alaska, and to Central America, for the purpose of making as complete a collection as possible of objects illustrative of the arts and industries of those countries. The special exhibit of each State in the Union will doubtless have an antiquarian display of its own, and in this way the archæology of the whole area of the United States will be fairly represented apart from the General Exhibit.

In the absence of information which I cannot obtain at the headquarters of the Columbian Exposition, and which I have not yet received from Professor Putnam, I am not able at present to give a detailed description of the intentions of the Department of Ethnology in relation to the anthropology of Great Britain, or of any other portion of the Old World.

In addition to the exhibit of the Department of Ethnology, the Indian Bureau at Washington has determined to have a separate Indian exhibit, in which will be brought together representatives

of existing tribes, under conditions fitted to show their ordinary mode of life. Probably the Zunis, Moquis, and Navajos will form the most interesting features of this exhibit, which possibly may become much more extensive than was at first proposed; as a suggestion has recently been made and favourably received, that a building shall be erected to contain "a complete collection of all manufactured articles distinctively Indian, and the best samples of goods of every kind made by Indians; Indian workmen and artisans of all kinds actively engaged in the manufacture of these articles and goods; all curiosities and relics pertaining to the present race; everything they have of an historical, literary, linguistic, or artistic character, past and present; and an agricultural exhibit showing their earliest known efforts in that department, and their greatest present success." Mr. Edward S. Ayer, of Chicago, who has what is probably the most valuable private collection of objects illustrative of North American Indian life in the United States, has offered to loan his collection for the purposes of the Indian Exhibit.

Inconnection with the Columbian Exposition a movement has been started for originating the holding at Chicago, during the Exposition of a series of "World Conventions of the leaders in the various departments of human progress," and "The World's Congress Auxiliary of the World's Columbian Exposition" has been formed, under the presidency of the Hon. E. C. Bonney, for carrying that idea into effect. The Congress Auxiliary, although an independent organization—as shown by its motto, "Not things, but men; not matter, but mind"—is officially recognised as part of the Exposition scheme. Its nature and objects will be best seen by reference to its Introductory Report, of which a copy is sent herewith. Various committees have already been formed, among them a committee on Scientific and Philosophic Congresses (p. 10), which includes, among others, sections for anthropology, archaeology, and ethnology. The proposed Congress Scheme has not yet been fully elaborated, and the President informs me that he proposes to make a further report on the subject shortly. I hope by that time to be able to furnish more detailed information as to the proposed plans of the Department of Ethnology.

C. STANILAND WAKE.

The Use of Sledges, Boats, and Horses at Burials in Russia.

Summarized from a Memoir by Professor ANUCHIN, of Moscow, by J. OLIVER WARDROP, Esq.

In a paper recently published by the Imperial Society of Archaeology in Moscow,¹ Prof. Anuchin has contributed largely to

¹ D. N. Anuchin: "Sani, Ladya i Koni kak prinadlezhnosti pokhoronnago obryada." (iz xiv toma "Drevnostei") Moskva. 1890 in 4°, 146 pp. with 44 illustrations.

our knowledge of the burial customs of his native land. We propose to present to our readers some of the most striking facts and conclusions contained in the work before us, omitting those passages which our author has borrowed from Western writers likely to be familiar to students in England.

The first half of the essay deals with *sledges*, and with them we begin: "The employment of sledges at funerals, not only in winter but also in summer, was customary in Russia before the days of Peter the Great, especially at the burial of princes and tsars, about whom, of course, we have much more information than we can obtain about private individuals and their customs." In describing the death of the Grand Duke Vladimir on the 15th of July, 1015, the ancient chronicler says: "He died in Berestov, and *they hid him* (*potaisha*) for Sviatopolk was in Kiev. And by night in the midst of the chamber they *made a hole in the floor*, and wrapping him up in a rug they lowered him to the ground with ropes; *having laid him on a sledge* they took him and placed him in the church of the Virgin which he himself had built."¹ It has been asserted that by the word "sledge" is meant merely some vehicle on wheels,² but Prof. Anuchin is not of this opinion. The passage is obscure, and there are several points in it that require elucidation. If "*they hid him*," why was he afterwards placed in the church, where we are told that "innumerable crowds of people" went to see the body and weep over it? The fact is that we have here an account of a pagan custom characteristic of the Germanic and Slav races in comparatively modern times. As late as the beginning of the seventeenth century we read that the Tsar Boris Godunov, popularly supposed to be a wizard, was removed from his tomb in the Archangel Cathedral through a hole made in the wall; and even at the present day when a person lies long in the agonies of death, it is customary to raise a beam in the ceiling in order to help his soul to leave the body; hence the proverb, "the beam cracks, somebody will die" (*matitsa treshchit, kto-nibud umret*). According to the folk-tales, wizards always die with great difficulty; in order to lessen their sufferings a beam in the ceiling is raised, and the bodies of such persons are taken out, not through the door, but through the window. In case of an epidemic, corpses are sometimes sent out of the window; among the Mazurs (in Poland) when several children in a house die they are lowered from the window in order to stop the plague.

As for the word "hid" (*potaisha*), it evidently has the same signification as *spiryatavshe*, often used by the ancient chroniclers,³ viz., the enveloping of the body in some mortuary cloth. In connection with the idea of "hiding," it is interesting to note that Plano Carpini says of a Tartar of rank, in the thirteenth century, "*sepelitur occulto*."⁴

¹ "Poln. Sobr. Russ. Lyet.," I, p. 56.

² Uspenskii: "Opyt o russkikh drevnostyakh." Kotlyarevskii: "O pogrebalykh obyayakh yazycheskikh Slavyan." M., 1868, p. 124.

³ "Poln. Sobr. Russ. Lyet.," I, pp. 70, 85, 88. ⁴ Ed. S. Pbg., 1825, pp. 94, 95.

Coffins are of very recent introduction, and it is not long since the Lopars, Samoyeds, Ostyaks, Cheremisses, Chuvashes, Votyaks, Kirgiz, and Tartars in Russia covered their dead merely with birch bark or planks, and there are still some who do this. Among the Russians themselves, in 1534, the Grand Duke Vasilii Ivanovich was carried to the church on an open bier, and deposited in a stone sepulchre after the service. Even in the seventeenth century, when the coffin had become an indispensable accessory of funerals, it was sometimes used as a temporary receptacle, and was taken away after the corpse had been placed in its tomb.

The making of a "hole in the floor" is a custom not confined to the Germans and Slavs. The Samoyeds on the Obi do not take the corpse out of the door, but make a hole large enough to allow of its removal through the opposite side of the hut.¹ The Samoyeds of Archangel make a hole opposite the point where the corpse lies, and take it out there.² The tribes on the Yenesei "do not take the corpse out by the door, but in the direction in which the head lies at the time of death, breaking a hole in the hut for this purpose."³ The same custom is found among the Eskimos and many North American tribes, in Africa, Polynesia, India, Siam, Thibet, China, &c.⁴; and in Europe, not only was it usual among the ancient Scandinavians and Germans, but at the present day one may see in many houses in Perugia and Assisi special doors for the removal of dead bodies. It thus seems clear that the case of Vladimir is but an example of an almost universal superstition, the fear that the dead man might come back through the door as a malevolent spirit.

After this long digression, Prof. Anuchin returns to the real subject of his essay—the use of sledges in burials. In the Sylvestrian MS. of the "Legend of SS. Boris and Gleb," we have several interesting miniatures, painted in the sixteenth century.⁵ One of them, entitled "Svyatopolk hides the death of his father," not only shows that by "making a hole in the floor," was meant merely the taking down of half of the fence round the courtyard, but it exhibits to us the use of the sledge; in another picture we see the body of S. Boris in a sledge carried on the heads of four men, while in a third the remains of S. Gleb are being dragged along in a sledge to a church.

In the Pouchenie (Instruction) of Vladimir Monomakh (early twelfth century) the writer describes himself as "sitting on the sledge," and all the commentators agree that the meaning is "on the brink of the grave." The use of sledges at funerals, even in summer, became so general that writers of the fourteenth, fifteenth, and sixteenth centuries rarely think it necessary to chronicle the fact, and when it is again mentioned in the seventeenth century it

¹ Kuselevskii: "Syevernii Polyus." S. Pbg., 1868, p. 119.

² Islavin: "Samoyedy." S. Pbg., 1847, p. 135-6.

³ Tretyakov: "Turukhanskii kral." S. Pbg., 1871, pp. 168, 177, 184, 189.

⁴ Tylor: "Primitive Culture."

⁵ The MS. was published in S. Pbg. in 1860.

is described as the "ancient custom." From 1670 to 1696 we have official accounts of eight royal funerals, at each of which the body was carried on a sledge, even in the middle of summer: but in 1706 it is expressly stated that the remains of the Princess Tatiana Mikhailovna were placed "on a bier, and not on a sledge."

The question now arises, whether by "sledge" we are to understand anything else than the vehicle generally known by that name nowadays. Some writers maintain that the word used signifies cart, or litter, but Prof. Anuchin shows that the chroniclers were well aware of the difference, and quotes passages in proof of this. The cart (*kola*) was used for carrying the dead, but only when no ceremony was required; such a jolting four-wheeled vehicle is delineated in the Sylvestrian MS. Sledges were employed for conveying the wounded and the sick, in preference to the rough carts of ancient times. The original form was the *telyega* (a Turkish word) on two wheels, replaced by the *kolymaga*, *koryeta*, or carriage.

From the fact that sledges were always used at royal marriages,¹ and by the patriarchs of Moscow, long after wheeled carriages had come into use² it is evident that the former were looked upon as more dignified. During Palm Week, an artificial palm was placed in the Kremlin, hung with fruit, and supported on a sledge; it is true that Olearius says *Wagen*, but we have plenty of authority for the contrary opinion.³ The condition of the streets, even in the capital, was deplorable as late as the seventeenth century, and the use of wheeled carriages must have involved great discomfort and danger.⁴ At the present day there are districts (*e.g.*, in Olonetz, Vologda, and Kostroma) where wheeled carriages are almost unknown, being replaced by sledges and drag-carts—in summer and winter alike.

The peasants in the government of Vologda take their dead to the cemetery on a sledge, which they turn upside down and leave on the grave. In this we find a Finnish as well as a Slavonic custom, for it is usual also with the Lopars, Voguls, Ostyaks, Samoyeds, Chukches, all of which tribes use reindeer, and have no other vehicle but the sledge. In leaving the sledge, the survivors are influenced partly by fear of the dead man and all his belongings (his arms, &c., are buried with him, and his reindeer slain on his grave); partly by their conception of a future life as one in which men have the same needs as they had before death, and would be likely to punish any who robbed them of the means of satisfying those needs. This custom is shared by the Finnish tribes far to the southward, at the foot of the Ural Mountains, and on the Volga; thus the Cheremiss of the Government of Orenburg use the sledge as a funeral coach, even in summer, and

¹ Olearius: "Reise." Ed., 1647, p. 140.

² Olearius: "Reise." Ed., 1647, p. 41. "Drev. Ross. Viri." M., 1788, vi, pp. 246, 336, 314.

³ Meyerberg: "Reise." Zani: "Relazione," 1691, pp. 171-2.

⁴ Cf. Fletcher. Herberstein. Olearius.

then leave it on the grave. Yet, in spite of all this, we are not to suppose that the Russians borrowed from the Finns the custom of using sledges at funerals, for we find it in Little Russia and among the Southern Slavs generally, as well as in ancient Egypt.¹ The case of Egypt is peculiarly interesting, for there the absence of snow and ice would seem to render such a method of conveyance very unsuitable.

Another use to which sledges are put in South Europe, North Africa, and West Asia is for threshing corn. Such a vehicle was called by the Romans, *traha*, *trahea*, *tribulum*, *tribula*;² at the present day it is called *noreg* in Egypt,³ and may be also seen in Spain and Portugal, Italy, Bulgaria, and many other countries.⁴ The under side is fitted with several rows of flint stones, or in some cases metal points. From all this, we have some right to conclude that at one period the sledge was the only vehicle known in all these different regions; its construction is far simpler than that of the roughest kind of cart on wheels. The sledge itself is evidently but an improved kind of drag (*tolokusha*), such as we find in use among the Indians of North America,⁵ and the natives of South Africa;⁶ in the one case the load is tied to two poles which cross each other on the saddle, and hang on the ground behind the horse; in the other, oxen are harnessed to a forked tree trunk, across the arms of which are laid sticks to form a kind of platform, on which can be put beasts killed in the chase. The very word for sledge (*sani*) seems to point to an evolution such as we have suggested; for it has a plural form, and the singular *san* signified a serpent. We find, too, in the folk-tales of Little Russia that "from the very beginning of the world men had no carts, but rode on sledges—summer and winter." "SS. Peter and Paul gave carts to the world." (According to another story the invention is to be attributed to Solomon.)⁷

Prof. Anuchin then gives Dr. Tylor's account of the origin of wheeled vehicles, illustrating it with a picture of the *arba* used in Abkhasia and other parts of the Caucasus, and with a brief summary ends this part of his essay.

Use of Boats at Burials.

Ibn Fadlan, in describing the customs of the "Russians" of Bulgar, on the Volga-Kama, early in the tenth century, says that

¹ "Wilkinson," vol. iii, ed. 1878, p. 429, &c., Plate LVI, lviii.

² Varro: "de re Rust." i, 52. Cf. Isaiah xli, 15, "I will make thee a new sharp threshing instrument having teeth."

³ "Wilkinson," i, 408.

⁴ It is curious to note that in many parts of Russia, and in Western Mongolia a "stone woman" (*kamennaya baba*) is often used for the same purpose, until all the features are worn off and the figure becomes merely a smooth, oblong stone, v, p. 63.

⁵ Remington, "The Horses of the Plains," in the "Century Magazine," Jan. 1880.

⁶ "Holub's Travels."

⁷ Chubinskii in "Trudy Etnogr. Statist. ekspeditsii v Zapadno-Russkii kraj Yugo-Zapad otdél, S. Pbg.," 1872, i, 104-6.

"when a poor man died they made for him a small boat, put him in it, and burned him"; but at the death of a person of rank they drew his vessel up on the bank, placed it on a wood pile, and prepared it for the reception of the deceased by erecting a tent in it. Having dressed the dead man in all his best garments, they set him on a rug in the tent, and propped him up with cushions; near him they placed strong drink, fruit, bread, beef, sweet herbs, and all his weapons; they also threw into the tent the mangled bodies of a dog, two horses, two oxen, a cock and a hen, one of the deceased's damsels was taken thither, strangled with a rope, and stabbed in the ribs; and finally the whole pile was burnt to ashes.¹ There is some doubt as to the nationality of these "Russians"; it is the fashion nowadays to minimise the Scandinavian element in the history of Russia, but, at any rate, we find in Norway and Sweden many traces of a similar custom, with this difference, that the ships were not burnt, and still exist; e.g., the Viking ships of Hokstad,² and Storhang.³

After referring to the *Wella-laiwe*, or "devil's ships," of Livonia, Kurland, and Esthonia⁴ (i.e., rows of monumental stones arranged in the form of a boat, sometimes the mere outline, sometimes so detailed as to give even a representation of the rowers' benches), Prof. Anuchin draws attention to the wide diffusion of the custom of burial in boats—from North America to Pegu and Polynesia. Among the Tunguz, Yureaks, and Ostyaks the dead are tied up in reindeers' skins (or sometimes in the hollowed trunk of a tree), and placed upon an elevated platform; among the first-named of these tribes, it was formerly the custom to 'carry about during their nomadic life, a light boat of bark intended to serve as a coffin on the death of the chief. The Ostyaks of the Obi are buried in the ground, confined in one half of a boat (the sharp bow end) from the other half two planks are taken to form a lid for the coffin; beside the dead man are laid all his belongings, including pipe and tobacco, beads, &c.; on the lid his bow and snow-shoes; then, above them, a layer of birch-bark. A similar plan is in use among the Voguli.

In early Russian history we have several instances which seem to confirm what the Arab geographer says about the people of Bulgar. Olga commanded that the ambassadors of the Drevlyane should be put into boats and buried alive in them in a hole dug for the purpose. The legend of SS. Boris and Gleb says that S. Gleb was put "between two planks," after his death, but in the miniature representing this event in the Sylvestrian MS., the words "under a boat" are added, and we see seven Varangian warriors

¹ Harkavy: "Skazaniya musulman. pisatelei o Slavyanakh i Russakh, S. Pbg.," 1876, pp. 93-101.

² "Archiv für Anthrop.," Bd. xiii, and Bd. xvii.

³ *Ibid.*, Bd. xviii, p. 378.

⁴ Grewingk, in "Archiv für Anthrop.," Bd. x. Sievers: "Ein Normannisches Schiffgrat bei Ronneburg, in Verhandl. der Berl. Gesellschaft für Anthrop.," 1875, p. 214.

performing this operation. In the *Kurgans* (barrows), we sometimes find the dead confined in hollowed tree trunks, and covered with trees from which the branches had not been lopped.¹ Here then is evidently a connection with the *Todtenbäume* of Germany, and the hollow tree trunk coffins used in England until the tenth and eleventh centuries;² even at the present day *Todtenbäume* is the word used for coffin in Suabia. The use of boats for burial purposes cannot be due merely to the convenience of such a method; many tribes that have boats do not use them for this purpose, and those that do, often take boats much too large for a coffin, and are obliged to break them into two parts. For those people to whom boats were a necessity of daily life there is no difficulty in finding an explanation; the boat would be left for the same reason as the arms, the snow-shoes, &c. But in the case of others it is possible to account for the custom in a different manner; if the "happy hunting ground" were to be reached by land, a sledge and reindeer would suffice for the purpose, but there were many who believed that it was beyond the sea, hence the necessity for a boat. Such a belief is peculiarly characteristic of races having traditions of a migration by sea;³ the shades of the departed go back to the mother country just as the dead Chinaman goes back to the Celestial Empire. The ancient Slavs had this idea of a world beyond the sea, but the commoner belief is that a river has to be crossed (*e.g.*, the Etyr, the Nile, the Euphrates, and as late as the sixteenth century the Germans said "an den Rhein gehen," in the sense of dying). Sometimes, however, there is a Charon, and money for the payment of such a ferryman is found in the graves of Britons, Burgundians, Allemans, Slavs, Finns, and Turkic peoples, and is not unknown at the present day in Macedonia, Asia Minor, France, Yucatan, India, and many other countries.⁴ In the Russian Empire it is found among Little Russians, White Russians, Great Russians, and Finns, but the meaning of it has been forgotten; in Germanic lands it has become Peter's pence.

Horses at Burials.

Even in countries where the horse is of comparatively recent introduction (*e.g.*, North and South America), it has become in many cases an indispensable accessory of funeral ceremonies. The Comanches, Apaches, and Patagonians, have curiously adopted customs characteristic of the ancient Scythians, Polovtsi, &c. But the immolation of so valuable an animal has in Europe become a thing of the past, and among some of the Slavonic peoples curious expedients have been resorted to in order to escape both the vengeance of the deceased and the sacrifice of property. Thus the Little Russians prefer to use oxen or to carry the body themselves

¹ Bobrinskii: "Kurgany i nakhodka bliz Smyeli, 1887."

² Lindenschmidt: "Handbuch" i, 121-2.

³ Cf. the Czech proverb "to fly over the sea to Veles (the sun-god)."

⁴ "Frazer."

to burial, the Russians of Galicia never use mares in funeral processions for fear they should become barren, the Croats never use their own horses, but borrow others to which the deceased would have no claim.¹

The American Indian custom of burying a warrior on horseback, dressed in his best and fully armed, is not unknown in Russia. The legendary hero, Potok Mikhail Ivanovich, on the death of his wife ordered his comrades to bury him alive on horseback.² But it is in the old Scythian barrows that we find the most interesting examples of such a custom, which is common to the Etruscans, Greeks, Gauls, and Germans,³ although it was always more usual to employ a chariot rather than a horse in such ceremonies. There are still, however, many examples of the bones of horses being found in graves, and although these generally date from the Iron Age, there are not a few cases in which they are of the Stone Age, From Homer⁴ we know that the Greeks killed horses on graves; but in the case of the barrows in modern Russia it is often difficult to distinguish the Greek from the barbarian. Mr. Lappo-Danilevskii⁵ has endeavoured to reconstruct the whole ceremony of royal burials in Scythia, and in his account the king is represented as being laid on a chariot drawn by four or six horses, followed by another chariot containing the royal treasures, then came the monarch's horse (or horses) saddled and harnessed. When the grave was reached, the body was buried, and in many cases the chariot was also thrown into the tomb; there was a separate grave for the horse; one of the king's concubines and some of his servants⁶ were buried with him. When the grave had been filled up the *trizna* (or funeral feast) took place; then, last of all, the mound was formed.

Coming down to more modern times we find that the custom of burying horses with their masters is less frequent in Western Russia than in Eastern Russia and Siberia; instead of the whole horse we find only parts of its skeleton (the skull or the leg-bones), the bit and the stirrups being laid on the grave. Among the Germans, the custom of which we have been treating seems to have died out in the times of the Karolingians, among the Slavs about the eleventh century; the Finnish and Turkic tribes of Eastern Russia continued it in some cases down to the eighteenth century, and in some parts of Asia it still exists. Isolated cases of killing a horse at a funeral may be found in Western Europe, even in the eighteenth century, the last case being at the burial of General Count Boos von Waldeck in 1781, when it took place as a

¹ Kotlyarevskii: "O pogrebalnysh obyachakh Slavyan," p. 222. Dobšinský: "Obyčaje, poverý a hry Slovenske," p. 109.

² "Drevniya stikhotvoreniya Kirshi Danilova," M. 1818, 222-3.

³ Cf. the barrow at Hampden Hill in Somerset. Kemble: "Horse ferules."

⁴ "Iliad," xxiii, 175.

⁵ "Lappo-Danilevskii," p. 480-5, in "Zapiski Russ. Arkheol. Obshch." Tom. iv, 1887.

⁶ Cf. "Herodotus."

part of the regular ceremonial of the old Teutonic Order.¹ Nowadays it only survives in the funerals of royal personages and soldiers, whose horses, saddled and dressed in mourning, accompany their masters' bodies to the grave, but are brought back again after the burial.

History of Opium, Opium Eating, and Smoking.

Historically speaking, there would appear to have been several phases in the growth of our knowledge of this substance. Various species of poppy are mentioned by early writers as ornamental garden plants; the merits of the seed, as affording oil, and as being medicinal and edible, were early recognised, perhaps before the discovery of the somniferous property of the capsules, and certainly anterior to the recognition of the value of their milky sap; the plant was grown as it is at the present day, in most parts of India and Central Asia, as a vegetable, similar in its action to lettuce; the capsules were employed in the preparation of soporific drugs, or in the manufacture of a stimulating and soothing beverage; and lastly came the discovery of the more potent nature of the inspissated sap. It seems probable that these phases were evolved in the order named, and that *papaver somniferum* was grown in Asia Minor for its capsules, which the Arabs carried all over the East, even to China, some time before the Greek discovery of the value of the juice. Opium was probably originally detected in *papaver setigerum*, though that species must have been rapidly displaced by *papaver somniferum*, a form which took its origin apparently in Asia Minor, and was itself very likely but a sport from *papaver setigerum*.

We learn, at all events, that the poppy was grown as a garden plant and its medicinal properties understood during the early classic periods of Greece and Rome. Homer gives us the simile of the exhausted warrior hanging his heavily helmeted head, like the drooping poppy-flower buds. Livy tells the story of one of the last of the Roman kings sending the message to his son, Sextus Tarquinius, to remove the headman of one of the Etrurian cities. That message was symbolically conveyed by the king striking off the capsules from the tallest poppy plants in his garden. Theophrastus, who lived in the beginning of the third century, was acquainted with a preparation from the poppy which he called *μήκωνιον* or the juice (*ὀπός*) of the *μήκων* plant. From the fact that all nations of the world have adopted some form of the word *ὀπός* or *ὀπιον* for the inspissated juice, while they often possess indigenous names for the plant, its seed, or medicinal capsules, it may safely be inferred that the discovery of the isolation of opium proceeded from the Greeks. Subsequent writers certainly dwell

¹ Stramberg, "Rheinischer Antiquarius," I, vol. i. "Coblence," 1851, p. 203; Tylor, "Primitive Culture," 3rd ed., vol. i, p. 474.

with greater significance on the soporific properties of the poppy (after the date of Theophrastus), than the earlier authors thought it necessary to do, so that the discovery, whether made by Greeks or Arabs, took place about that date. By the beginning of the Christian era the knowledge in opium may be said to have become universal. Vigil speaks of the lethean virtue of the plant (*"Lethæo perfusa papavera somno,"* *Georg. I.*, 78). Unger failed to find any record of the poppy or of opium in connection with ancient Egypt, but the Egyptians of the first century, A.D., used the capsules, if not the opium, as a medicament. Pliny (*Lib. XX.*, c. 76) pays special attention to the medicinal value of *opion*. Among his contemporaries Dioscorides narrates with the minutest detail the process of extracting the *ὀπός* or *ὀπιον*, and distinguishes it from *μηκύνειον*. From his remarks it may be inferred that in his time the art of extracting the drug constituted an important industry in Asia Minor. Indeed during the classic period of the Roman Empire, as also in the early Middle Ages, the only sort of opium known was that of Asia Minor. In the thirteenth century Simon Januensis, physician to Pope Nicholas IV., refers to *opium thebaicum*, although *Meconium* was even then still in use. But if to the Greeks be due the discovery of opium, the Arabs most undoubtedly carried to the utmost corners of the Eastern countries the knowledge of that drug. In the first instance they made it known to Persia, and subsequently to India and China.

That the followers of the faith of Islam proclaimed the properties of opium to the people of India there can be no doubt, since the Sanskrit and all the vernacular names in this country are traceable to the Semitic corruption of *ὀπός* or *ὀπιον* into *Afyūn*. Thus its best known Sanskrit name is *hiphena*, and its Hindī *Afīm*; but direct historic records exist which also leave no doubt that the poppy was not known to the people of India prior to the Arab influence. The early Chinese works tell of the Arab traders exchanging poppy capsules for the merchandise of China, and its Arabic name became in the Chinese tongue *Ya-pien*. In the time of the Caliphs the Arabs certainly visited India and China, especially after the founding of Baghdad (A.D. 763). Previous to the Táng dynasty the poppy apparently was not known to the Chinese. When first shown to them its urn-shaped capsules, full of millet-like seeds, suggested the names *Mi-Nang* (= millet-vessels) and *Ying-su* (= jar-millet). The Arab doctors directed the Chinese to prepare of these capsules a soporific beverage and medicine. Hence it may be stated that the introduction of the *ya-pien* followed the *mī-nang*. Interest in the oil-yielding seeds and medicinal capsules had thus been fully roused in Asiatic countries long anterior to the introduction of opium. It is therefore not difficult to understand the existence of names for those parts of the plant that are undoubtedly more ancient than the word opium, some of which even seem as if they are not actually of an indigenous character in the countries where used. Thus, for

example, as has been stated, the Greeks were acquainted with the value of the seeds and capsules prior to their knowledge of the inspissated juice. Virgil commemorates not only the poppy as possessing, like the river Lethe, the power of producing forgetfulness, but he connects the opium plant with the goddess Ceres. The contention here advanced (of the discovery of opium being intimately associated with the Greeks) by no means, however, precludes the inhabitants of Asiatic countries where species of papaver were found wild, from having contemporaneously, or even at an earlier date than the classic records of Greece and Rome, recognised the value of these plants as vegetables, as sources of oil, or as medicines. Some of the Asiatic names for the parts of the plant may therefore be spontaneous, that is to say, they were not necessarily imported with a communication of the value of opium. Several species of *papaver* are met with in India, some very plentifully. Moorcroft states that in Garhwál the young plant is used as a vegetable raw, or cooked, with buttermilk. The same fact has been observed by the writer in connection with the Panjáb Himálaya, where white, red, or white and red variegated forms are grown. Throughout the opium producing provinces of the plains the young plants obtained from the early weedings are universally eaten as a salad. The plant is never, however, exclusively cultivated as a vegetable, but the superabundant seedlings are weeded out from time to time and eaten, thus leaving the healthiest to mature their capsules. In many parts of the Himálaya these are not scratched for their opium, though that property is fully known. Thus Mr. Baden Powell informs us that this is the case in Jálandhar, where the poppy is grown for its capsules, which are used in making *post*, an infusion consumed as a beverage. The *post* of the Panjáb appears to closely resemble the *kuknár*, which was a luxury among the Muhammadans in the time of Akbar. Bontius, writing of Batavia in 1658, tells us that the Indians were there divided popularly into two sections, those called *pusti*, who smoke an inferior opium prepared from the leaves, stems, and capsules of the poppy; and those called *afyuni*, who could afford to purchase the ordinary opium. Throughout India the seeds of the poppy are cooked in various sweetmeats, or are employed in the extraction of an oil which is used for culinary and other purposes. It need not, therefore, be a subject of much surprise that in the Persian, Arabic, and Indian languages there should exist names (some of which became like *post* or *pust*) widely diffused, and which appear quite independent of Greek literature. Indeed, had the cultivation of the poppy proceeded exclusively from the Greeks, and diffused eastward, prior to the Aryan invasion of India, the people of Egypt and Palestine might have been expected to have possessed an earlier knowledge of it than the Roman epoch. Far from this being so it can hardly be said to be mentioned in Hebrew literature, since the Jerusalem Talmud (seventh century) is the earliest work that alludes to *ophyon*, a

poisonous drug ; and Pliny, in the first century, is the earliest author who refers to Egyptian opium. It seems, therefore, highly probable that the merits of the poppy seed and poppy capsules were known to the Arabs and to the people of large tracts of Central Asia, and even of Upper India, anterior to the supposed Greek discovery of opium. But the silence of the early Sanskrit authors leaves no room for doubt that right down to the commencement of Muhammadan influence in India the various wild poppies of the country attracted very little attention. We have no evidence that *papaver somniferum* ever existed in any part of India, Balúchistán, Afghánistán, or even Persia, in a wild state, and even now, after at least a thousand years of cultivation, it has nowhere manifested any tendency to become naturalised. It thus seems likely that for many years the early Arab traders brought by land and sea the capsules of the poppy just as they carried them to China, and it need only be here added that long after poppy cultivation had been started in India, the Arabs continued to bring to this country Arabian opium in competition with that of Cambay. Opinions differ very materially as to the effect of habitual use of small doses of opium as a luxury or indulgence. The bulk of the medical evidence goes to support the verdict that it is not more injurious than the moderate use of alcohol, and that even its abusive use is less destructive to the victim and his friends than intemperance. In tropical countries the protection it affords against fever and other depressing influences is contended to justify its use as almost a necessity of life. The danger lies in its greater power to retain its victims than prevails with alcohol. But to the people of India this feature of opium seems far less serious than in Europe. A very large community are known to take a small amount daily and to continue to do so throughout life without ever showing any tendency to desire to increase the daily allowance. It is even contended that in China, where opium indulgence attains its greatest proportions, the people are strong, healthy, active, and lose none of their national characteristics through the daily use of opium ; that, on the contrary, the majority of the working classes manifest far less evidence of demoralisation and physical degeneracy than occurs with the labouring classes of Europe, who participate daily in an allowance of spirits. "Return of an article on opium, by Dr. Watt, ordered by the House of Commons to be printed, 1st August, 1891." Price 8d.

"The Inscriptions of Cos." By W. R. Paton and E. L. Hicks. With map. (Oxford, at the Clarendon Press, 1891.) 28s. pp. 54 and 408. The author of the Preface of this important work states that he has aimed at the publication of a corpus of the Coan Inscriptions, Mr. Hicks having contributed the Introduction ; the cursive texts and commentaries being a joint work. The Introduction contains a most carefully prepared history of the island from the date of the Homeric Catalogue (2, 676) to the end of

the first century A.D. The work is divided into the following sections: Inscriptions from the city of Cos; Inscriptions from the Demes; Coan coins with names of magistrates; Coan names; The Coan Calendar; Sepulchral Inscriptions with Fines; The Doric Tribes in Cos; Cos and Southern Thessaly, Anius, Calymna, and Cos; Theocritus, was he a Coan? Merops. Table of Coan inscriptions previously published.

The localities of the inscriptions are carefully given, together with critical notes on the texts.

"The Eskimo Tribes, their distribution and characteristics, especially in regard to language." By Dr. Rink. (Longmans, 1891.) pp. 124. Vols. I and II. Map. The author in his Preface, states, "In the pages which follow I will try to show how the peculiarities of the tribes in the different domains of culture agree with the supposition that the original Eskimo inhabited the interior of Alasca; that, apart from the true Eskimo, a side branch of them in the farthest remote period peopled the Aleutian Islands, whereas people of the principal race, later on, settled at the river mouths, spreading northward along Bering Strait, and hiving off some colonies to the opposite shore, proceeded round Point Barrow to the east, the Mackenzie River, over the central regions or Arctic Archipelago, and finally to Labrador and Greenland. This dispersion may have taken thousands of years; they can only have proceeded in small bands, very much as they still are used to move about during certain seasons." The first portion of the work deals with the inventions for procuring the necessary means of subsistence, dwellings, dress and ornaments, domestic industry and arts, religion and folk-lore, sociology, distribution, division, &c.; while in the second portion the language and grammar is considered.

"L'homme dans la Nature." P. Topinard. (Bibliothèque Scientifique Internationale.) pp. 8 and 352. Paris, 1891. (Illustrated.) In the first chapter the author defines the scope of the work by stating "Taking the word 'nature' in its purely physical meaning, we shall only consider the animal Man. We shall commence by viewing anthropology in its strict sense, by discussing its range, its relation to general zoology, and the methods of study necessary for attaining the object of the book, i.e., the place that Man occupies, in the general, among animals, and his probable origin or descent."

"A Concise Dictionary of the Korean Language." By H. B. Underwood, assisted by H. B. Hulbert and J. S. Gale. (Student edition.) (Kelly and Walsh, Yokohama, 1890.) The authors in the preface state that the spelling as given in the Chyen Oun Ok Hpyen has been taken as the standard.

"A note on the Age of Marriage and its Consummation, according to Hindu religious law." By R. G. Bhandarkar, M.A.

Deccan College, Poona. pp. 53. In this work the state of the Hindu law on these points is carefully discussed.

"Behār Proverbs." By John Christian. (Kegan Paul, 1891.) 8vo., pp. 256. In classifying the proverbs the compiler states that he "has been guided by their subject matter, their application and use. This system might not be the best, but it seemed to him to be the one which had most reason on its side. It is natural, and has the advantage of easy reference. . . . The system of transliteration adopted is the same as that of the 'Behār Peasant Life,' by Mr. Grierson. It may be briefly described as the Jonesian system, with every possible diacritical mark omitted." The proverbs number 506. The appendix contains a short paper on popular superstitions and errors, together with a Hindi index.

"The Status of Woman in India: or, a Handbook for Hindu Social Reformers." By Dayaram Gidumal, B.A., LL.B. Bombay, 1889. 8vo., pp. 337. The aim of the work is the abolition of infant marriage and enforced widowhood.

"The Hindu Law of Adoption." Tagore Law Lectures, 1888. By Golāchundra Sarkār Sāstrī, M.A., B.L. Calcutta, 1891. 8vo., pp. 485. The titles of the lectures are:—1. Origin of adoption and status of sons and wives in ancient law. 2. Doctrine of spiritual benefit and twelve kinds of sons. 3. Sources of law, commentaries, and twelve kinds of sons. 4. British period, law of adoption, *factum valeat*, and caste rules. 5. Capacity of males to adopt. 6. Capacity of females to adopt. 7. Who may give, and who may be given in adoption. 8. Who may be taken in adoption, or capacity to be adopted. 9. Formalities and ceremonies necessary for a valid adoption. 10. Effect of adoption on the status and inheritance of the adopted. 11. Effects of invalid adoption and litigation relating to adoption. 12. *Kritrima son*, adoption by non-Hindus, and special forms of adoption.

"Myths and Folk-tales of the Russians, Western Slavs, and Magyars." By J. Curtin. (Sampson Low, London, 1890.) 8vo., pp. 555. The volume contains twenty Russian, six Chekh, and six Magyar myths and folk-tales.

"The Silk-goddess of China and her legend." A. Terrien de la Couperie. (David Nutt, London, 1891.) 8vo., pp. 28. The pamphlet discusses the ancient geography of sericulture, calendaric rules, rites, and customs, various tutelary spirits and goddesses of silk, and the formation of the legend of the Goddess Si-ling she Lui tsu.

"Brāhmanism and Hindūism; or, religious thought and life in India." By Sir M. Monier-Williams, K.C.I.E. (Murray, London, 1891.) pp. 603, 8vo. The author in the preface gives the following answer to the question, What is a Hindū, and what is Hindūism? "It claims to be the one religion of humanity, of human nature, of the entire world. It cares not to oppose the

progress of any other system, for it has no difficulty in including all other religions within its all-embracing arms and ever widening fold. And, in real truth, Hindūism has something to offer which is suited to all minds. Its very strength lies in its infinite adaptability to the infinite diversity of human characters and human tendencies. It has its highly spiritual and abstract side suited to the metaphysical philosopher; its practical and concrete side suited to the man of affairs and the man of the world; its æsthetic and ceremonial side suited to the man of poetic feeling and imagination—its quiescent and contemplative side suited to the man of peace and lover of seclusion. Nay, it holds out the right hand of brotherhood to nature-worshippers, demon-worshippers, tree-worshippers, fetish-worshippers. It does not scruple to admit the most grotesque forms of idolatry, and the most degrading varieties of superstition. And it is to this latter fact that yet another remarkable peculiarity of Hindūism is mainly due—namely, that in no other system of the world is the chasm more vast which separates the religion of the higher, cultured, and thoughtful classes from that of the lower, uncultured, and unthinking masses. The former religion I call Brāhmanism, the latter Hindūism; but as I have shown at length in the present volume, the two are really one, and the higher, purer, and more spiritualistic system has led to the lower, more corrupt, and more materialistic form of doctrine, through the natural and inevitable development of its root ideas and fundamental dogma." The subject is divided into Vedism, Brāhmanism, Hindūism, Śaivism, Vaishṇavism, Śāktism, village deities, demon and spirit worship, hero and saint worship, death, funeral rites and ancestor worship, worship of animals, &c., Hindū religion in family life, fasts, festivals, and sacred places, caste, and examples of the moral precepts of Brāhmanism and Hindūism. The volume is well indexed.

"The Tribes and Castes of Bengal." By H. H. Risley. (Calcutta, Bengal Secretariat Press). 2 vols., royal 8vo., pp. 875. 1891. The author states that "the measurements recorded in these volumes were taken under my supervision in Bengal, the North-Western Provinces, and the Panjab during 1886 and the two following years. The instruments used were those contained in the *boîte anthropométrique* recommended by Prof. Paul Topinard in his *Éléments d'anthropologie générale*, with the addition of the goniometer devised by him for measuring the facial angle of Cuvier." Eighty-seven tribes and castes are fully dealt with.

The following important Article is extracted from "The Times" of August 24th, 1891:—

"An undertaking of the highest interest and importance has been quietly brought to completion in Bengal. This is nothing less than a scientific survey of the races and peoples of that province, carried out by an organised inquiry in each district, and based on the anthropometric measurement of the heads of nearly

applied to him during the recent agitation which attended the passing of the Age of Consent Act.

"But, whatever may be the administrative value of his labours, their pre-eminent importance is as a scientific record of new facts bearing on the racial development of the tribes and castes of Bengal. At a conference of experts in Northern India he settled the main lines of the inquiry, and then drew up a series of leading questions to be answered by the district officers, missionaries, native scholars, and such other private correspondents and local agents as he could enlist in the work. He thus secured the co-operation of 190 coadjutors, distributed over every district in Bengal, and communicating in their turn with an indefinite number of the tribes and castes who formed the subject of inquiry. The local correspondents were instructed to mistrust accounts published in books, to deal with the people direct, and especially with persons who were the hereditary or professional depositories of the information sought, such as the caste genealogist, the caste priest, the marriage broker, and the head of the caste Council of Five.

"Mr. Risley's list of queries adapted to Indian conditions the corresponding heads of inquiry prepared by the Committee of the Anthropological Institute of Great Britain and Ireland in 1874. He had also the advantage of receiving the valuable collection of *data* accumulated during thirteen years by the late Dr. James Wise in South-Eastern Bengal. Dr. Wise was one of those indefatigable solitary workers, of whom there have been many in India, who devoted their lives to laborious local investigation, and died, with the results still unpublished. Few, indeed, of their names have been rescued from forgetfulness by so noble a tribute as the lines in which Mr. Risley now dedicates his volumes to Dr. Wise's memory. In communication with Professor Flower, Director of the Natural History Department of the British Museum, and with Dr. Paul Topinard, Professor of the School of Anthropology in Paris, Mr. Risley proceeded to work out a scheme for the anthropometric measurement of representatives of all the leading tribes and races in Bengal. The necessary instruments were provided by the Provincial Governments, and Mr. Risley instructed a staff of native assistants in the work. It is noteworthy that this most delicate series of measurements, extending over nearly 6,000 persons, and forming one of the largest pieces of original research lately done in the world, was carried out chiefly by three Indian gentlemen—two Hindoos and one Mahomedan. In each case the measurers were taught the use of the instruments by Mr. Risley, and were supplied by him with instructions defining the procedure in extreme minuteness of detail, and explaining the difficulties which experience had taught him were likely to arise. But the severe and long-protracted task of measurement was mainly conducted by the three young native medical assistants.

"Anthropometry, whose methods were thus brought to bear for the first time, on an adequate scale, upon the problems of Indian

race-development, is comparatively a new science. The Egyptian sculptors of Carnac and Memphis may have worked on its principles, but its best-known modern application is in the Prefecture of the Paris Police, where the facial angle and features and limbs of convicted criminals are measured, with a view to their identification in the future. Mr. Risley defines it, for his present purpose, as the science which seeks, by measuring certain leading physical characters, such as the stature and the proportions of the head, features, and limbs, to ascertain and classify the chief types of mankind; and eventually, by analysing their points of agreement and difference, to work back to the probable origin of the various race-stocks thus disclosed.

"The minute discoveries and elaborate inductions which Mr. Risley has by these methods arrived at, must be tested by European and American anthropologists before they can be received as final. But there are certain broad results, in regard to which the evidence seems to be complete. Mr. Risley found three theories current as to the origin and racial development of the Indian peoples; and he has had to pronounce at the outset as to which of these theories his anthropometric measurements support. The one theory was the artificial, but orthodox, view of the Hindoo sacred texts, that each of the four main castes or races was a separate emanation from the head, body, legs, and feet of the Creator; in short, that certain castes or tribes had been separately created to rule, while others had been separately created to serve, in accordance with a divinely fore-ordained scheme of human society. The second theory may be described as a highly rationalized view of this traditional hypothesis, worked out from the evidence collected, district by district, during the statistical survey of India, and embodied in a popular form in the 'Imperial Gazetteer.' The third theory was directly contradictory to the two former. It was elaborated by Mr. Nesfield, a careful and philosophic observer in Oude, who came to the conclusion that 'the question of caste is not one of race at all, but of culture.' The ethnical division of the Indian peoples at the present day into two great stocks, called, for want of a more definite phraseology, Aryan and non-Aryan, or 'aboriginal,' seemed to him chimerical. 'I hold,' he had said, 'that, for the last three thousand years at least, no real difference of blood between Aryan and aboriginal (except, perhaps, in a few isolated tracts, such as Rajpootana, where special causes may have occurred to prevent the complete amalgamation of race) has existed.' Mr. Risley commences his statement of the conclusions arrived at from anthropometric measurements by dealing with this question.

"In the first place," he writes, "it deserves notice that the *data* obtained by the most modern anthropological method agree in the main, not only with the long chain of Indian tradition, beginning with the Vedas and ending with the latest vernacular treatise on the theory and practice of caste, but also with the rationalized and critical story of the making of the Indian peoples as it has been

told' in the 'Imperial Gazetteer.' Here the historian shows how, through the veil of fable and miracle in which prehistoric India is shrouded, 'traces may be discerned of a protracted struggle between a lower and a higher race, which would have tended to produce much the same results as our statistics bring out.' But the statistics of actual measurements now accumulated give a precision to the theory, which could not have been arrived at on the conflicting testimony of tribal customs, or on the still more uncertain evidence of language.

"Those measurements place beyond doubt the existence of two distinct types of man in India, alike in the present and in the past. This is in addition to a third or Mongoloid type on the north-eastern frontiers, which need not be dwelt on at present. There is, Mr. Risley says, the 'Aryan type,' with a relatively long (dolichocephalic) head; a straight, fine nose; a long, symmetrically narrow face; a well developed forehead and regular features; a high facial angle; a tall stature, ranging from 171·6 centimètres in the Sikhs of the Punjab to 165·6 in the Brahmans of Bengal; a well-proportioned figure, slender rather than massive, and a very light brown complexion—'wheat-coloured' is the native term—noticeably fairer than the mass of the population. The second type of Indian mankind, for which Mr. Risley still retains the name of 'Dravidian,' exhibits a marked contrast to the foregoing description. The nose, he says, is thick and broad, with a higher numerical formula to express its dimensions than that of any known race, except the Negro. Although the head inclines to be dolichocephalic, the facial angle is comparatively low; the lips are thick; the face wide and fleshy; the features coarse and irregular; the figure squat and sturdy, with an average height of only 156·2 to 162·1 centimètres. If we take one of the most important and distinctive features of a race—the nose—the following results are obtained. While the average nasal proportions of the Parisians, as measured by Professor Topinard, are represented by 69·4, the corresponding measurements give 68·8 for the Aryau Sikhs of the Punjab, and 70·4 for the Aryan Brahmans and Kayasths of Bengal. In contrast with these figures, the average nasal proportions of a characteristic non-Aryan or Dravidian tribe of Bengal are as high as 94·5.

"This nasal index is discovered by Mr. Risley to afford also an index to the actual position which an Indian caste holds in the orthodox scale of purity or rank. 'If we take a series of castes in Bengal, Behar, or the North-Western Provinces, and arrange them in the order of the average nasal index, so that the caste with the finest nose shall stand at the top and that with the coarsest at the bottom of the list, it will be found that this order substantially corresponds with the accepted order of social precedence.' Thus, the casteless tribes, like the Kols and other hill or forest races who still lie outside the Hindoo pale, would occupy the bottom place according to both the systems of arrangement; the vermin-eating low castes and leather dressers would come next; then the

fisher castes; then certain pastoral castes; then the cultivating Kurmis and cognate group, from whose hands a Brahman can take water; and so upwards, through the trading Khattris and the land-holding Bábhans, to the Brahmans themselves and other castes just below them, at the head of Hindoo society. 'Thus,' says Mr. Risley, 'it is scarcely a paradox to lay down as a law of the caste-organisation in Eastern India, that a man's social status varies in inverse ratio to the width of his nose.'

"The evidence now collected discloses also a curious and most interesting correlation between the breadth of the nose in the Indian castes, their social status, and their caste-customs in regard to marriage. The matrimonial groupings, to which Mr. J. F. M'Lennan applied the term *exogamous*, vary in India in a definite relation to the gradations of the physical type. Within a certain range of nasal proportions, says Mr. Risley, the *exogamous* or marriage groups are based on the totem—the animal or thing held sacred by the group. As the nose becomes finer and the tribe or caste holds a higher position in the social scale, the marriage groups are divided and called after villages or districts, or territorial areas, or after the titles of tribal officials. Advancing still upwards in the social scale, we reach the high Aryan castes, with their finely cut noses and their *exogamous* marriage groups, bearing the names of eponymous saints and heroes, who, in India as in Rome, figured prominently at a certain stage in the progress of Aryan mankind.

"Space precludes us from following Mr. Risley into the interior recesses which his researches have laid bare. But the more recondite aspects of his work can only be appreciated by a careful study of his entire book. For, while a cabinet of curiosities from a remote antiquity is thrown open to the ordinary reader, the processes employed and the conclusions arrived at must be subjected to the tests of patient and accurate scholarship. The administrative and practical aspects of the undertaking have compelled Mr. Risley to publish the main body of his results in the form of an alphabetical list of tribes and castes—a form which renders somewhat difficult a critical examination of the evidence as a whole. Enough has been said to show the scope of the undertaking and the spirit in which it has been carried out. Mr. Risley has accomplished a great work, great in regard to both the magnitude and the value of its present results, but perhaps greater as pointing the way to even larger results in the future."

"Legendary Fictions of the Irish Celts." By Patrick Kennedy. (Macmillan.) 8vo., pp. 312. 1891. The work contains a carefully compiled collection of Folk Tales arranged under the following headings:—Household Stories, Legends of the "Good People," Witchcraft, Sorcery, Ghosts, and Fetches, Ossianic and other early legends, and Legends of the Celtic Saints. The volume contains 104 legends, and the whole has been carefully edited.

"Anthropological Religion." The Gifford Lectures delivered before the University of Glasgow, in 1891. By F. Max Müller, K.M. (Longmans, Green and Co.) 8vo., pp. 464. 1891. Price 10s. 6d. The author, in the preface, thus describes the scope of the work. "In lecturing before the members of the University of Glasgow, on the origin and the growth of Religion, my chief object has been to show that a belief in God, in the immortality of the soul, and in a future retribution can be gained, and not only can be, but has been gained, by the right exercise of human reason alone, without the assistance of what has been called a special revelation. I have tried to prove this, not, as others have done, by reasoning *à priori* only, but by historical investigation; I have tried to gather in some of the harvest which is plentiful, but which requires far more labourers than are working in this field at present. In doing this, I thought I was simply following in the footsteps of the greatest theologians of our time, and that I was serving the cause of true religion by showing by ample historical evidence, gathered from the Sacred Books of the East, how what St. Paul, what the Fathers of the Church, what mediæval theologians, what some of the most learned of modern divines had asserted again and again, was most strikingly confirmed by the records of all non-christian religions which have lately become accessible to us by the patient researches of oriental scholars, more particularly by the students of the ancient literature of India." The following are the titles of the Lectures:—"On freedom of religious discussion." "On toleration." "Summary of the results of Physical Religion." "The Historical proof of the existence of God." "About the true character of Ancestor-worship." "The untrustworthiness of the materials for the study of religion." "The discovery of the Soul." "Discovery of the Soul in man and in Nature." "Funeral ceremonies." "What was thought about the departed." "Soul after death." "What does it lead to?" "The Divine and the Human." Among the appendices are articles on Totems and their various origin, on the untrustworthiness of Anthropological evidence, on the untrustworthiness of the accounts of the religious ideas of savages, funeral ceremonies, &c. The work is well indexed.

"The Real Japan." Studies of contemporary Japanese manners, morals, administration, and politics. By Henry Norman. (T. Fisher Unwin.) 1892. Demy 8vo., pp. 364. This work is a valuable addition to our knowledge of the present state of Japan. The principal subjects dealt with are, Japanese journalism, Japanese justice, Education, Japan as an Eastern power, Arts and Crafts, Japanese women, rural Japan, Japan for the Japanese, and the future of Japan. The work is well illustrated.

"Travels in the Mogul Empire, A.D. 1656-1668." By Francois Bernier. (Archibald Constable.) 1891. Crown 8vo., pp. 54 and 497. This reprint forms the first of the Oriental Miscellany

Series. The work has been carefully edited, and contains a bibliography of the writings of the author. The volume is well indexed.

"The Right Hand: Left-handedness." By Sir Daniel Wilson, LL.D. (Macmillan.) 1891. Crown 8vo., pp. 215. "The following treatise includes data originally accumulated in a series of papers communicated to the Canadian Institute and the Royal Society of Canada, aiming at determining the cause of left-handedness by a review of its history in its archæological, philological, and physiological aspects." The work is divided into the following chapters the hand, the educated hand, the willing hand, palæolithic dexterity, the dishonoured hand, the primitive abacus, the compass points, handwriting, psycho-physical action, conflict of theories, and hand and brain.

"Popular tales of the West Highlands," orally collected, with a translation by the late J. F. Campbell. Vol. iii. (Alexander Gardner.) 1892. Crown 8vo., pp. 440. The volume contains 29 tales, in each case the name of the narrator and transcriber being given. In some cases the English and Gaelic are placed in parallel columns, while in others the English version alone is reproduced.

"Across Thibet." Being a translation of "de Paris au Tonkin à travers le Thibet inconnu." By Gabriel Bonvalot. 2 vols. (Cassell and Co.) 1891. Medium 8vo., pp. 448. These two splendidly illustrated volumes give a vivid account of the journey undertaken by M. Bonvalot, accompanied by Prince Henry of Orleans. "Starting from the frontiers of Siberia, and coming out at the other end of Asia, on the coast of the new French colony of Tonquin, M. Bonvalot and his companions not only traversed that portion of Thibet, which several English travellers, such as Dalgleish and Carey, and the great Russian Prjevalsky, had explored, but going beyond the limits their predecessors had reached, forced their way over the table-lands and came out on the other side, this journey being one which no European had ever accomplished." The work contains a large amount of Anthropological information with regard to the tribes met with.

"Egypt under the Pharaohs." A history derived entirely from the monuments by Heinrich Brugsch Bey. New edition by M. Brodrick, with maps, plans, and illustrations. (Murray.) 8vo. 1891. This appears to agree with the last English edition of 1881, carefully condensed into one volume in such a way that nothing that is still valuable has been lost in the process, whether as to matter or typographical clearness. The Editor has also been able to insert not a few of the most recent discoveries into the text or notes. Professor Brugsch, whose activity in the domain of Egyptology has been increasing during a period of nearly half a century, drew his history direct from the monuments. Unrivalled

knowledge of every branch of the literature of Ancient Egypt enabled him to select for it the most striking texts, frequently giving long extracts in readable translation. The reader is thus brought face to face with the Egyptians, and moreover, can catch glimpses of a multitude of other nations and tribes, who paid their tribute or came as mercenaries to Egypt; who were hunted by Pharaoh in his *razzias*, fought him on equal terms, or invaded or ravaged his territories. However perilous it may be to trust to the letter of translations from hieroglyphic texts, this most able work cannot fail to be usefully suggestive to the scientific man, as well as deeply interesting to the general reader. (F.L.G.)

Journal of Researches into the natural history and geology of the countries visited during the voyage of H.M.S. "Beagle" round the world. By Charles Darwin, M.A., F.R.S. (from the corrected and enlarged edition of 1845), with a biographical introduction by G. T. Bettany, M.A., B.Sc. New Edition. (Ward, Lock and Co., 1891.) 8vo., pp. 492.

"Teutonic Mythology." By Viktor Rydberg, Ph.D. Translated by R. B. Anderson. (Swan Sonnenschein, 1889.) 8vo., pp. 706. In this important translation the following points in Teutonic mythology are dealt with:—The ancient Aryans, ancient Teutondom, mediæval migration Sagas (the learned Saga in regard to the emigration from Troy-Asgard); reminiscences in the popular traditions of the Middle Ages of the heathen migration Saga. The myth concerning the earliest period and the emigrations from the North. The myth in regard to the lower world. The Invalde race, &c. On page 494, *et seq.*, the heathen conception of human nature is dealt with from an anthropological point of view. "The anthropological conception presented in Voluspa is as follows:—Man consists of six elements, namely, to begin with, the lower and coarser, and to end with, the highest and noblest:—(1) The earthy matter of which the body is formed; (2) A formative vegetative force; (3 and 4) Loder's gifts; (5) Honer's gifts; (6) Odin's gifts." The volume is well indexed.

"Synopsis of Old English Phonology." By A. L. Mayhew, M.A. (Clarendon Press, 1891.) 8vo., pp. 327. The author, in his preface, states that "The work is an attempt to give a systematic account of the correspondences of the West Saxon vowels and consonants: in the first place, with primitive Germanic and pre-Germanic sounds; secondly, with the sounds of the principal old English dialects; and thirdly, with the sounds in modern English."

"Grammar of the Bengali language." By John Beames. (Clarendon Press.) 8vo., pp. 68. 1891. This work is intended to be specially useful to those who desire to understand the spoken language of Bengal, other works not adequately preparing the European student for communication with the lower and middle classes.

"Education and Heredity": a study in Sociology. By J. M. Guyan. (Translated.) London: Walter Scott. 8vo. 1891. pp. 306. Suggestion and education as influences modifying the moral instinct; The genesis of the moral instinct; Physical education and heredity; The object and method of intellectual education; The school; Secondary and higher education; The education of girls and heredity; Education and "rotation of crops" in intellectual culture; The aim of education and evolution. Is it consciousness, or the automatism of heredity? The author states: "I shall endeavour to exhibit the exact rôle belonging to the two terms before us, namely, hereditary or ancestral habit, and individual habit—the one incarnate in the organism, and the other acquired."

"The Supernatural?" By Lionel A. Weatherly, M.D. (Simpkin Marshall, London.) 8vo., pp. 273. The work deals in a popular manner with Sane sense deceptions; Doubtful cases of sense deceptions; Insane sense deceptions; Sense deceptions caused by fever, poisoned blood supply, &c. A chapter is added on Oriental jugglery, spiritualism, and theosophy, by Mr. J. N. Maskelyne.

"Proceedings of the Royal Colonial Institute," vol. xxii, contains a paper of pp. 31, on the aborigines of Australia, by Edward Greville.—An article on Matabeleland and Mashonaland, by Rev. F. H. Surridge.

"Transactions of the Canadian Institute," vol. ii, part 1. The Beothick Indians, by A. Macdougall.—Surnames and place-names of the Isle of Man, by Rev. Neil MacNish, B.D., LL.D.—A review of Mr. A. W. Moore's work on the subject.—Bone caves, with especial reference to prehistoric man, by Arthur Harvey.

"Journal of the Royal Society of Antiquaries of Ireland," vol. i (5th series), No. 7. On fifteen Ogham inscriptions recently discovered at Ballyknock, County Cork.

"Folklore," vol. ii, No. 3. Mr. Stuart-Glennie's views on the origins of Matriarchy are discussed.

"Bulletin de la Société de Borda," 1891, part 1, contains a note (illustrated) on the tumulus of Chateau-Charles at Estibeaux (Landes), by J. de Laporterie.

"The American Antiquarian," vol. xiii, No. 5, contains articles on the migration of the Wichita Indians, by A. S. Gatschet.—The removal of the Taensa Indians.—The Mysterious (i.e., prehistoric) races (illustrated), by S. D. Peet.—Carved columns or totem posts of the Haidas, by T. H. Lewis.—Neolithic man in Nicaragua, by J. Crawford.—The man of Spy, by Max Lohest, with minor notes.

"The American Anthropologist," vol. iv, No. 3, has articles on the New School of Criminal Anthropology, by R. Fletcher, M.D.—The story of a mound, or the Shawnees in Pre-Columbian times, by Cyrus Thomas.—Marriage among the Pawnees, by G. B. Grinnell.—A Quarterly Bibliography of anthropological literature.

"Revue Mensuelle de l'école d'Anthropologie de Paris," No. 9, SEPTEMBER, has a continuation of a paper on the Etruscans (commenced in the July number), by André Lefevre.—A prehistoric summary, by Gabrielle de Mortillet (illustrated).

No. 11, NOVEMBER, contains Human Industry in Italy during the Quaternary period, by A. de Mortillet (8 plates).—The Report of the French Association for the Advancement of Science, 1891, Anthropological Section.

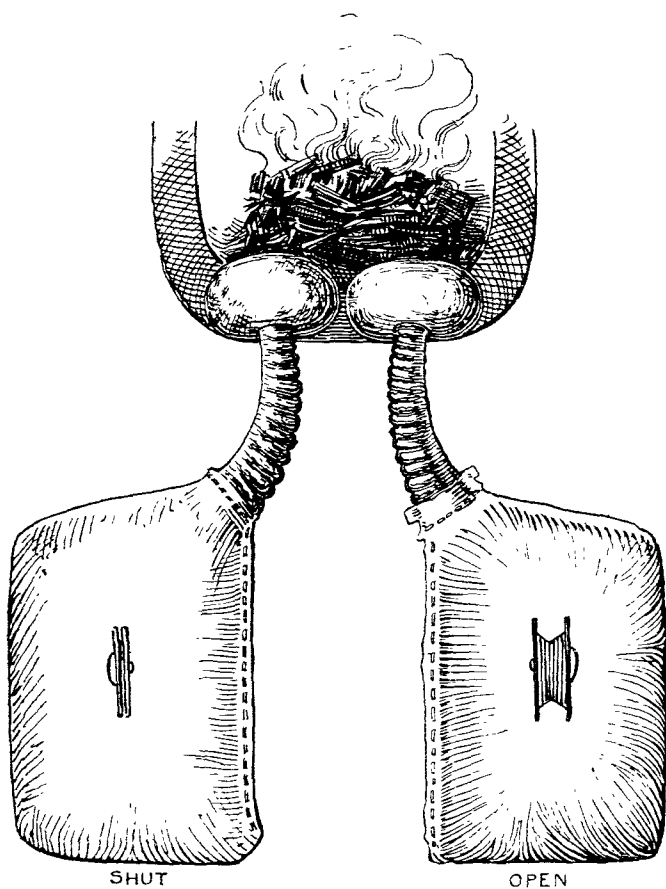
"Bulletin of the Academy of Sciences of Cracow," July, has a note on a dictionary of the dialect of the Ainos inhabiting the island of Choumchou in the Archipelago of Kouriles near Kamtchatka.

"Examination of a Theory of the Mental Constitution." By C. Staniland Wake. (Bond Bros., Chicago.) 8vo. 1891. Pp. 19.

"Delagoa Bay," its natives and natural history. By Rose Monteiro. (Philip and Son, 1891.) 8vo., pp. 274. The volume gives a popular description of life in Delagoa Bay, with remarks on the animal and vegetable life of the district.

"Maori-Polynesian Comparative Grammar." By Edward Tregear. (Wellington, New Zealand, 1891.) 8vo., pp. 675. "Regarding the Maori speech of New Zealand as but a dialect of the great Polynesian language, the author has attempted to organize and show in a concise manner the existing related forms common to New Zealand and the Polynesian Islands. . . . No small proportion of the labour expended on this work was exerted in providing examples of the use of words both in Maori and Polynesian." The languages and dialects considered in the volume are Maori, Samoan, Tahitian, Hawaiian, Tangan, Rarotongan, Marquesan, Mangarevan, Paumotan, and Moriori.

"Transactions of the New Zealand Institute," vol. xxiii⁴ (1891), contains an article by Mr. Edward Tregear on curious Polynesian words. The author cites a considerable number of examples to prove "that it is unlikely that the Maori is quite the primitive, simple, virgin language which some have supposed it to be."



SOUTH AFRICAN BELLOWS

THE JOURNAL
OF THE
ANTHROPOLOGICAL INSTITUTE
OF
GREAT BRITAIN AND IRELAND.

DECEMBER 8TH, 1891.

EDWARD B. TYLOR, Esq., D.C.L., F.R.S., *President, in the Chair.*

The Minutes of the last Meeting were read and signed.

The election of Sir HUGH LOW, K.C.M.G., of 23, De Vere Gardens, Kensington, was announced.

The following presents were announced, and thanks voted to the respective donors :—

FOR THE LIBRARY.

From the DELEGATES OF THE CLARENDON PRESS.—The Inscriptions of Cos. By W. R. Paton and E. L. Hicks. 8vo. Oxford, 1891. Map.

From the PUBLISHERS.—Das Weib in der Natur-und Völkerkunde. By Dr. H. Ploss. 2 vols. 8vo. Leipzig, 1891. (Th. Grieben's Verlag. L. Fernau.) Plates and woodcuts.

— Delagoa Bay, its Natives and Natural History. By Rose Monteiro. 8vo. London, 1891. (G. Philip and Son.) Plates and woodcuts.

— Egypt under the Pharaohs. By Heinrich Brugsch-Bey. 8vo. London, 1891. (John Murray.) Maps and woodcuts.

— Brâmanism and Hindûism. By Sir Monier Monier-Williams, K.C.I.E. 8vo. London, 1891. (John Murray.) Frontispiece.

— Teutonic Mythology. By Viktor Rydberg, Ph.D. 8vo. London, 1889. (Swan, Sonnenschein and Co.)

- From the AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.—
Proceedings. Vol. xxxix (1890).
From the EDITOR.—Die Urgeschichte des Menschen. Parts 13-20
—— L'Anomalo. Anno iii. N. 10.
—— Nature. Nos. 1152, 1153.
—— Revue Scientifique. T. xlviii. Nos. 22, 23.
—— Rassenga della Scienze Geologiche in Italia. Anno i. Fasc.
1, 2.
From the CANADIAN INSTITUTE.—Transactions. Vol. ii. Part 1.
From the ROYAL UNITED SERVICE INSTITUTION.—Journal. No. 166.
From the DEUTSCHE GESELLSCHAFT FÜR ANTHROPOLOGIE, ETHNOLOGIE,
UND URGESCHICHTE.—Archiv für Anthropologie. Band xx. 3.
From the ROYAL GEOGRAPHICAL SOCIETY.—Proceedings. Vol. xiii.
No. 12.
From the ROYAL SCOTTISH GEOGRAPHICAL SOCIETY.—The Scottish
Geographical Magazine. Vol. vii. No. 12.
From the SOCIÉTÉ DE BORDA (Dax).—Bulletin. 1891. 1-3.
From the SOCIETY OF ARTS.—Journal. Nos. 2036, 2037.
From the SOCIÉTÉ D'ANTHROPOLOGIE DE LYON.—Bulletin. Tome
ix, 2.
From the SOCIÉTÉ D'ANTHROPOLOGIE DE PARIS.—Bulletins. 1890, 4;
1891, 1, 2.
From the SOCIETY OF BIBLICAL ARCHEOLOGY.—Proceedings. Vol.
xiv. Part 1.

Mr. OSBERT H. HOWARTH read a Paper on "The Toltec Relics of Teotihuacan, Mexico."

Mr. CHARLES H. READ, Mr. H. BALFOUR, Mr. A. L. LEWIS, Dr. E. B. TYLOR, Mr. R. B. HOLT, and Mr. H. SETON-KARR took part in the discussion, and the Author replied.

A Paper by the Rev. B. DANKS, on "Burial Customs of New Britain," was read, upon which the PRESIDENT made a few remarks.

BURIAL CUSTOMS of NEW BRITAIN.

By the Rev. B. DANKS.

It is my purpose, in this paper, to describe the burial customs of the people of New Britain, with a few other notes which may be considered as being connected with those customs.

1. The burial of the common people is a very unceremonious affair. By the common people I mean those who have not any very great quantity of shell-money, or whose friends have little or nothing to expend on their funerals.

2. Only in one instance have I met with a custom similar to that found in the *Kurnai* tribe as related by Fison and Howitt, where the remains are wrapped in sheets of bark, and put in the house, the friends, including the mother, sitting for hours day after day, weeping, howling, and crying out the name of the child or saying "*Na tung, Na tung*" = my child, my child. The child, I believe, was eventually buried in the house.

3. The grave is usually dug in the house inhabited by the deceased while alive, or a light structure is erected over the grave, to protect it from the rain. It is generally not more than eighteen inches or two feet deep, and it is the custom for the women of the family, sometimes the men, to sleep upon it for a considerable time after a burial. A fire also is often lighted upon, or by the side of it, and is kept burning day and night for a considerable time. The meaning of this I could never ascertain to my own satisfaction, but on one occasion, I asked some mourners why they slept upon the grave, and they said, "To keep him company"; when asked about the fire they said it was "To keep him warm."

4. Sometimes, the grave is dug out in the open and fenced around with bamboos, the enclosure being kept in good order by the friends, who plant beautiful shrubs and crotons about it. Trees are also planted in memory of the departed if he were a man of mark; these are called the "*Naruina*." This is done principally on Duke of York Island. On New Britain they have a custom of calling to mind the circumstances and mode of death suffered by the departed, which is as follows:—

Rude images are cut out of the banana stem, each representing some man whose name it bears for the time being. Some have a piece of wood suspended from the neck, others have pieces of bamboo thrust into various parts of the body. Another may have a rudely fashioned tomahawk driven deeply into it. The first shows that the individual represented has been clubbed, the second speared, the third tomahawked. The old men then instruct the young people in these matters, and doubtless this exhibition has in the past proved a powerful factor in sustaining vengeful feeling and promoting blood feuds. I only once saw this exhibition.

5. Like all savage people the inhabitants of the New Britain group fail to understand that death may come in the course of nature, but consider that it is the result of witchcraft.¹

¹ In order to bewitch a person, the wizard cuts a piece of wood from a tree called the *Balbal* or the *Kalep*, also a certain part of the cocoanut tree. These are tied together and covered with a red earth and suspended by a string. The wizard then takes a croton in one hand and a spear in the other, and sits down beneath it to mutter his charm. In his charm he asks the spirit to whom he is

6. There seem to be three methods by which the blame of having caused a death by witchcraft is fixed.

1. A man who has the reputation of being a wizard is always open to the charge, and so always liable to trouble.

2. The second method is as follows:—

The remains are placed in an open space. Some man who has no relatives (he may have children), takes a pearl shell in his hand, and lies down at right angles with the corpse, his head pointing towards the centre of the body, the two thus forming the letter T, he stretching out his arm. An old man then stands in the midst of the people—who are assembled for the occasion—and calls out, one by one, the names of all the men of the village. If no move is made, he then proceeds to call out the names of the men of other villages until a rapping is heard in the shell held by the man. The rapping is supposed to be done by a spirit, to whom they appeal for information as to who is the culprit. The individual at the utterance of whose name the rapping is heard, is at once accused of causing the death of the deceased, and if possible, immediate compensation is sought or vengeance taken.¹ Nothing that may be said or done will convince the people that the man indicated is innocent of the charge. I have known persons thus accused to be seized at night and literally hacked to pieces.² So far as I could gather, the charge generally falls on one who owed the deceased a grudge during his lifetime, and there is plenty of room for all kinds of personal revenge on the part of those engaged in the test.

3. A person may be accused on the word of someone, who having gone into the bush, returns and states that he met a certain person there, behind whom he saw the spirit of the deceased, following him about. Such a statement brings trouble upon the unfortunate individual who is thus reported.

7. In Duke of York Island feasts are often held in remembrance of the dead. On one occasion I saw no fewer than five pigs killed for such a feast. Prior to killing them, a whole week

praying to take a piece of the *Balbal* or the *Kalep* and thrust it inside the victim and so cause his death. The wizard must be careful not to swallow any of his own spittle while muttering his charm or he himself will be bewitched.

¹ See my paper on the "Shell-Money of New Britain." "Journ. Anth. Inst.," vol. xvii, p. 305.

² Such was done when the influential man Balilai died. A man was dragged out of his house at night and chopped to pieces, and then sold for a cannibal feast, piece by piece.

was spent in dancing and singing from sunset to sunrise. Men and women, old and young, all joined in the dances. On the day appointed the pigs were killed and cooked whole. Before cutting them up, a man took a knife and cut loose a piece of skin, about two inches in diameter, on the fore part of the skull of each pig. He then stood up holding an old cocoanut in his hand by the sprouts growing out of it, and calling upon the name of a deceased man said, "This is for you;" he then struck the pig with the cocoanut on the spot where the skin had been cut loose. Each pig was thus devoted to some departed soul. This custom is called the "*Wetu*."

Fear is entertained by the people lest the spirits of their departed friends should prove vindictive and seek to hurt them. To propitiate them a rude kind of altar is erected in the family enclosure, upon which food is continually kept, a fresh supply taking the place of the old as soon as necessary. The spirits seeing themselves thus cared for are supposed to continue kindly disposed towards the survivors.

The sign of mourning is the anointing of the hair and face, especially the forehead, and sometimes the whole body with a black substance by burning a certain sweet-smelling grass to tinder, and mixing with it a little cocoanut oil. It is not compulsory for all, even when a chief dies, to anoint themselves, but it is not considered proper to refuse, and once having put it on it is not permissible to wash it off without the consent of the relatives of the deceased. When it is considered that it is necessary to renew the application at least once a week, and sometimes oftener, and that upon one occasion in the town in which I lived, this went on for six months, it will be readily admitted that the people must have been in a very filthy condition when at last permission came to "*Iu korokoro*," i.e., wash away the mourning paint.

After a death regular feasts are held for a time, each feast being named after the principal fruit or vegetable used at the feast, such as breadfruit, yam, taro, &c. As these various fruits, &c., ripen, so are the feasts held. This is called "*bungbung*," meaning literally to "*day him*," or holding days of remembrance for the dead. On Duke of York Island the friends used to congregate during these feasts early in the morning, each taking something in their hands, a fowl, or some food, or present, and starting away together they will go a considerable distance about the bush, crying as they run, "*Ukwing, akwing, ukwing, akwing*." What the terms mean I was never able to ascertain, the natives themselves not appearing to know. It is simply a custom, and its exact value I could not learn.

A widow will go out about dusk and call out the name of her

deceased husband in the most plaintive tones. They say they sometimes get an answer, but when they do, they seem very much afraid. On one occasion one of our young Fijian teachers hearing a widow thus calling upon her husband, went a short distance into the bush, and when she called, he answered. That was more than the widow wanted, and being greatly terrified she never called him again.

8. I shall now proceed to give an account of the burial of To Pulu, a leading chief on Duke of York Island. The account was written by one from that place to our missionary secretary, the late Rev. Benjamin Chapman, and published for the information of our Church people. As it was written on the spot, and while all the incidents were fresh in my memory, I think it better to give it as then penned, although not in the best form for this paper and purpose. I may state that the men *Warawaram* and *Neragua*, were brothers of the dead man *To Pulu*.

"January 24th, 1881. To Pulu is dead! We were made aware of it early this morning, and great excitement has prevailed all day. The body was brought across from *Makada* early this morning in a canoe, and they intend to bury it on *Warawaram's* grounds. I heard a great shout at the foot of the hill, and went out to meet the procession. First came about eighteen men, all armed with spears, tomahawks, and slings, their faces and different parts of their bodies whitened with lime, as though about to engage in battle. These were the vanguard. They appeared to be much excited, and came up the hill yelling and gesticulating in a most extraordinary manner, and as though charging an enemy. When they arrived on *Warawaram's* grounds, they drew up in line, and awaited the approach of the body. As soon as it appeared in sight, a fierce yell was uttered by those guarding it, and at once throwing themselves into skirmishing order, they advanced up the hill, a few of them only coming direct up the path, the majority of them spreading out on either side in the bush, and fiercely, and with yells of defiance, from tree to tree. The men on the crown of the hill separated at once, some hiding behind trees and logs, others descending the hill to meet the ascending troop. At last the two parties made a rush at each other, and the wildest confusion prevailed, the marvel being how any of them escaped being wounded and some killed. The two parties then joined to carry the body up the hill. The remains were placed upon the ground, and all gathered around, each with his spear's point resting on the earth, and thus gazed upon the face of their late chief. They suddenly broke away, some forming themselves into an attacking party, the others defending the body.

The women now began to assemble from all quarters, and

the noise and confusion was increased tenfold. *Warawaram* came, and in his noisy way added to the excitement, which became so fierce, each man beating the air so freely with his tomahawk, or thrusting so carelessly with his spear, that I thought it advisable to go away from the crowd and put a fence between them and myself. Mounted on some stones on the other side of that I felt more comfortable. *Warawaram* threw a large number of things from his house, which were at once seized by the women and destroyed. Clothes of all kinds were torn to pieces, shell-money ground to powder, food destroyed in large quantities, and at one time I thought the house itself would be torn down. I have been among this people, pleading for peace and mercy for others, when all their worst passions have been aroused, but never before have I seen them moved by anger and passion as these appeared to be.

It was the intention of the friends to bury the body on the spot in a canoe set upon poles, but as this would be done just in front of my door, and as the body putrefying there in the open could be no pleasant neighbour, I begged them to suspend the body somewhere else. This they readily consented to do, and the corpse was forthwith taken to *Neragua's* grounds about half a mile away. I went and saw the funeral rites, which were as follows:—

A rough chair was made of a number of cuttings from the *Balbal*. The body was then dressed in the best clothes to be found in the dead man's wardrobe—a pair of white trousers, a white shirt, and a sailor's jacket completed the attire. His face was painted as though he were about to attend a dance, a warrior's tuft of feathers was fixed on his head, and a mouth-piece usually carried by men in their teeth when fighting, was fastened in his mouth. He was then seated in the chair, his spear was put in his hand, and his tomahawk, sling, musket, and club were all placed near him on the ground.

After some considerable delay *Warawaram* came accompanied by his six wives, he walking on first, while they followed bearing a great load of shell-money and other things. Three fires were then lighted in front of the deceased, one belonging to *Warawaram*, another to *Neragua*, the third to *Paula Kiaplin*, the dead man's nephew, only a chief being allowed the privilege. Around these fires were put guns, spears, and various kinds of weapons, a large quantity of shell-money, and anything of value or use which the owner of the fire could find in his house was there as a present *To Pulu's* spirit.

Warawaram made the largest show, bringing more than one hundred fathoms of shell-money, five or six guns, a large quantity of powder and ball, beads, pipes and tobacco, and

native ornaments. Consequently he seemed to think himself entitled to make the most noise. Seizing his spear he danced about in a most astonishing manner. Advancing towards the corpse with his spear poised and pointing to it he addressed it as follows:—"Look at this! Look at this, I say! It is all my own and no man shares with me. I alone have brought it, I alone give it." *Neragua* addressed the corpse in the same manner, using the same words. The people stood and looked on, simply grunting their approval of this performance.

Tobacco was then cut up and cast as a sacrifice on the fire—which, by the way, was never allowed to burst into a blaze, there was smoke and none too much of that. Beads, cloth, and pipes were offered in the same way. But do not think they were permitted to remain there. Oh no! The people came from all quarters and surrounded the fires, and there was quite a scramble for the different articles as they were thrown away. The dead man's soul was welcome to the shadow or spirit of these things but it would be a shame indeed for substantial mortals like themselves to lose the substance which could be of no use to him. It was a sight which beggars description. In one case I heard a woman call to a friend of hers—any one could offer a present—and say:—"You see this knife?" She held up a butcher's knife about six inches long. He answered "Yes." "I am going to throw it into the fire, look smart after it." And truly she did throw it on the side of the almost dead fire, and he quickly removed it. The most unseemly conduct was indulged in, and angry recriminations, but in only a few cases could I detect traces of genuine sorrow.

The friends decided to bury or elevate the remains in a sacred canoe which belonged to the *Dukduk* society of which *To Pulu* had for many years been chief. After a time we heard the sound of the reed¹ blowing as done by the members of the society who are allowed to wear the *Dukduk* dress. We knew then that they were bringing the canoe. The drums began to sound, and all was excitement and confusion. The body was taken from the chair and laid on a mat on which had been spread some calico. All the people gathered around it, some few to make presents, but the majority to take what they could lay their hands upon. Shell-money was twined around the hands, arms, legs, feet, and even thrust into the

¹ This reed blowing, for I do not know what else to call it, is very peculiar. A blade of sedge-like grass is taken and held firmly between the two thumbs when pressed one against the other, the hands being so arranged as to form a chamber at the back of the blade. They then blow upon the *edge* of the blade, which produces a very loud and peculiar sound. I have seen the same thing done by children in Staffordshire when a boy, but the sound produced was not nearly so loud as in New Britain.

mouth, nostrils, and ears of the corpse. Some took off different articles of clothing and placed them upon the body; more beads and tobacco were sacrificed, and then amid an indescribable confusion of quarrelling, strife and crying, the corpse was wrapped up in its mat shroud and left upon the ground to await the arrival of the canoe.

All eyes were now fixed upon an opening in the bush by which the canoe must enter the clearing. Drums rolled out their volume of sound, men shouted, the *Dukduk* men blew their reeds, and those near me literally trembled with excitement.

By degrees the noise subsided until nothing could be heard but the peculiar beat of the drum, the drummer striking it about twenty times per minute, to which the bearers of the canoe kept step, advancing one pace to each stroke. At last the canoe was in sight, and, springing to their feet, the men on the ground seized their weapons and stood as though about to receive an attack. On the other side of the clearing another body of men appeared about five or six abreast and fifty deep. The majority carried each two or three spears, and a few had guns; all were carrying their weapons as though charging an enemy. Step by step the two bodies of men approached, each party shouting defiantly to the other. At last they met and the uproar was something horrible. I cannot possibly convey to the mind an adequate idea of the frantic doings of these wild men. They surpassed themselves, and never do I expect or wish to again witness a scene wherein human beings are so transformed into frantic demons.

In the midst of these demonstrations, the canoe was placed upon the ground and the body was laid in it, then for a quarter of an hour one could only put his fingers in his ears and long for the end of the fearful drama. The canoe with its occupant was hoisted upon two poles, which were firmly fixed in the ground, the upper ends having each a crotch in which the canoe rested; a few leaves and mats were strewn over the body, and *To Pulu*, the ancient one, was left alone in his glory.

More shell-money was brought out after this, and all present sat down while *Warawaram* and *Neragua* distributed some to each one according to his or her rank. I received ten fathoms, which was more than was given to anyone else present.

Each one as he received his cash arose and left the grounds, so that in about an hour the relatives of the deceased were left alone in peace. But they had not finished with *To Pulu* yet, for it is reported that *Neragua* claimed the dead man's wives, and occupied with them a house, but deceased, evidently not

liking this arrangement, afflicted him with a cold. Next day as they were sitting all together, near the canoe in which *To Pulu* was buried, his spirit snatched away the seat from the canoe and threw it into their midst. Why he did this none can tell, unless the action of the wives explain matters, for they at once arose and left *Neragua*, and after that there was peace."

9. I may supplement this by an account of what I saw in New Britain in 1886. A brother of a chief having died it was decided to bury him as *To Pulu* had been buried. But first of all they bored a hole in the bottom of the canoe, then selecting a sound bamboo they broke away the inside partitions, thus making a tube. They then dug a hole in the earth, in which they fixed the lower end of the tube, the upper end being fixed into the hole in the bottom of the canoe. When the stench became unbearable, quantities of sea water were dashed into the canoe, which washed the putrefaction into the earth. I have heard that the people did not shrink from allowing the liquid putrefaction to fall upon their bodies from the canoe, which they would then rub over themselves, thus showing their affection for the dead.

When nothing but the bones were left, they were gathered and buried in a place known only to the friends. In Duke of York the canoe was left in the open, but on New Britain a house was built over it. In the former place, the skull was taken, and after being washed was placed in the *Dukduk* house, where drums would often be beaten in its ear on the supposition that the soul was in or about the head.

10. In New Britain when the bones were removed, the canoe, the mats in which the body had been wrapped, and the house which had been built over it, were taken out to sea and cast adrift to go wherever wind and current might carry them.

11. Sacrifices are offered after the burial is over. A screen is made of bamboos and reeds firmly fixed in the ground, and then neatly tied together and painted according to the taste of the artist. Upon this screen fowls are suspended alive, also pigs, and left to die. Large quantities of food are also hung upon it, especially bananas. This is followed by the feasting already described.

12. In some parts of New Ireland the dead are buried in the sea, but how and under what circumstances, and with what customs, I have not been able to ascertain.

JANUARY 12TH, 1892.

EDWARD B. TYLOR, Esq., D.C.L., F.R.S., *President, in the Chair.*

The Minutes of the last Meeting were read and signed.

The election of ARTHUR MONTEFIORE, Esq., of Marlborough Road, Bedford Park, was announced.

The following presents were announced, and thanks voted to the respective donors :—

FOR THE LIBRARY.

- From the SECRETARY OF STATE FOR THE COLONIES.—Further Papers relating to the Protected Malay States. Reports for 1890.
- From the INDIA OFFICE.—The Tribes and Castes of Bengal. Anthropological Data. By H. H. Risley. 2 vols. 8vo. Calcutta, 1891. pp. xxxviii, 876.
- From Prof. ALEXANDER AGASSIZ.—Annual Report of the Curator of the Museum of Comparative Zoology at Harvard College. 1860.
- From the DELEGATES OF THE CLARENDON PRESS.—Grammar of the Bengali Language. By John Beames. 8vo. Oxford, 1891. pp. 68. (Price 4s. 6d.)
- Synopsis of Old English Phonology. By A. L. Mayhew, M.A. 8vo. Oxford, 1891. pp. xix, 328. (Price 8s. 6d.)
- From the PUBLISHERS.—The Supernatural? By Lionel A. Weatherly, M.D., and J. N. Maskelyne. 8vo. London, 1891. (Simpkin, Marshall.) pp. xv, 273.
- Education and Heredity. By J. M. Guyan. 8vo. London, 1891. (Walter Scott.) pp. xxiv, 306.
- Journal of Researches during the Voyage of the Beagle. By Charles Darwin, M.A., F.R.S. 8vo. London, 1891. (Ward, Lock and Co.) pp. 492. Illustrated.
- Legendary Fictions of the Irish Celts. By Patrick Kennedy. 8vo. London, 1891. (Macmillan and Co.) pp. xvi, 312.
- Travels in the Mogul Empire, A.D. 1656–1663. By François Bernier. 8vo. Westminster, 1891. (A. Constable and Co.) pp. liv, 500. Map and illustrations.
- The Real Japan. By Henry Norman. 8vo. London, 1892. (T. Fisher Unwin.) pp. 368. Illustrated.
- Across Thibet. By Gabriel Bonvalot. Translated by C. B. Pitman. 2 vols. 8vo. London, 1891. (Cassell and Co.) pp. xii, 218 ; viii, 230. Map and illustrations.
- From the ÉCOLE D'ANTHROPOLOGIE (Paris).—Revue mensuelle. 1891. No. 12.

- From the STATE BOARD OF HEALTH, MASSACHUSETTS.—Report to the Legislature of Massachusetts relating to the Registry and Return of Births, Marriages, and Deaths in the Commonwealth, for the year ending December 31, 1890.
- From the GEOLOGISTS' ASSOCIATION.—Proceedings. Vol. xii. No. 5.
- From the EDITOR.—The American Antiquarian. Vol. xiii. No. 6.
- The Journal of Mental Science. Vol. xxxviii. No. 124.
- Nature. Nos. 1154–1158.
- Revue Scientifique. Tome xlviii. Nos. 24–26. Tome xlix. No. 1.
- Science. Nos. 453–463.
- From the ROYAL UNITED SERVICE INSTITUTION.—Journal. No. 167.
- From the UNITED STATES NATIONAL MUSEUM.—Proceedings. Vol. xiii.
- From the ANTHROPOLOGICAL SOCIETY OF BOMBAY.—Journal. Vol. ii. No. 5.
- From the ANTHROPOLOGICAL SOCIETY OF WASHINGTON.—The American Anthropologist. Vol. iv. No. 4.
- From the ROYAL GEOGRAPHICAL SOCIETY.—Proceedings. Vol. xiv. No. 1.
- From the ROYAL SCOTTISH GEOGRAPHICAL SOCIETY.—The Scottish Geographical Magazine. Vol. viii. No. 1.
- From the SOCIETY OF ARTS.—Journal. Nos. 2038–2041.
- From the SOCIETY OF BIBLICAL ARCHEOLOGY.—Proceedings. Vol. xiv. Part 2.
- From the SOCIÉTÉ DE GEOGRAPHIE (Metz).—Jahresbericht. xiii.
- From the UNIVERSITY OF TOKIO.—Journal of the College of Science, Imperial University, Japan. Vol. iv. Part 2.

Mrs. FRENCH-SHELDON read a Paper on “Customs among the Natives of East Africa, from Teita to Kilimegalia, with special reference to their women and children.”

The Paper was illustrated by lantern views, and a large collection of objects of ethnographical interest from East Africa.

CUSTOMS *among the NATIVES of EAST AFRICA, from TEITA to KILIMEGALIA, with SPECIAL REFERENCE to their WOMEN and CHILDREN.*

By MRS. FRENCH-SHELDON.

MY main object in visiting Africa was to interrogate and study peoples who had never come in contact with whites, and were in a comparatively primitive state of existence. In scanning the world I found there were but few places that afforded

this opportunity excepting East Africa. The fact that I was a woman gave me certain advantages over male travellers, and the novelty of a white woman was so great that the inhabitants were full of eagerness and curiosity to see me, giving me many opportunities to see them, as it were, off-guard.

My method of procedure was to harmonize and attract towards me rather than to bully and subdue them by any rough methods, and I found myself amply repaid by this course. Although people are always liable to the criticism of having played a *rôle*, or of having been a trifle theatrical, when they carry out the methods employed by me, no one will dispute that the result has brought forth such quaint points in their character that there is no apology necessary. When I received the Sultans, to hold a "shauri," I made a grand toilet, wearing a white silk gown covered with silver, carrying jewelled swords and belt, and having a yellow wig; in fact, I received all potentates in Africa exactly—except the wig—as if I had been in a civilised country meeting the ruler of such a country. This so delighted them that they immediately brought to me the treasures of their possessions, their best beads, their best clothes, their finest spears, frequently saying that the white men whom they had occasionally seen, came to them in rags and tatters, and were no better off than they were. Having heard that a certain tribe used wigs when dancing, and knowing the difficulty of procuring a specimen of this decoration, my wig served to induce them to fetch me *their* wigs, and, ultimately, prompted them to present me with such as I now have in my collection.

The higher up towards Kilema-njaro I went, the more intelligent I found the natives, and not only were they more intelligent, but they had a finer physique; their lineaments lost their negroid characteristics, they became more or less Egyptian; their heads were long, with features more or less regular; their colour—never black—but like the Malay type, a deep sepia; however, the customs were approximately the same with all the tribes. They are all polygamists, and this from necessity more than from the licentiousness which taints the East.

The women are necessary adjuncts to every man's possessions, just in accordance with the wealth he possesses in cattle and plantations.

The males, like almost all other natives, do no menial work that they are not forced to do by certain exigencies which prohibit the fulfilment of the task by women. The women till the soil, care for the cattle, carry the loads, and attend markets; play the part of spies, and form the intermediary line of connection between provinces, even during times of hostilities.

They may pass freely from one province to another during all general disturbances, without any apprehension, carrying food for exchange, and are often the messengers from one Sultan to another, to carry a message of treaty or desire for truce.

Their system of polygamy is based upon a very sound principle. No man has more wives than he has live stock and plantations to warrant, and the wife or wives already installed in a native's "boma" seem utterly devoid of the, seemingly, more civilised trait of jealousy. A new wife is hailed with delight, and all the established household exert themselves to the top of their bent to do her honour, and welcome her into their midst, and with a very few exceptions (which are not tribal but personal), the wives live together in the same house or hut. They evidently respect, in their way, the sanctities of each other's households, as much as English or Americans do in their homes. They never presume to enter the "boma" of friend or relative without the query equivalent to "may I come?" or a rap at the door.

They have a great spirit of fun lurking ready to burst out into shouts of ringing laughter at the slightest provocation, and as I went marching as quietly as possible through the approaches to their plantations, I could but marvel at their joviality and the happiness which seemed incumbent upon the free life, untrammelled by all the burdensome troubles of civilisation, and thought, "these people certainly have propensities above that of simple barbarism; they must have qualities of nature, which, if properly approached and properly directed, would make them useful members of the world's communities."

There is a species of insolent pride about the chiefs that is almost droll. For example, in their palavers, which occur every afternoon in every village, an elder, or the sultan, or some man of importance, with all of his followers and brothers surrounding him, will stand up with great pomp, flourish his knob-kerry stick, and say, "I, Songora, the son of Endella (who was the great chief of the tribe) of Kilema, say to you, that since the mountain was sick and vomited forth the stones upon which we stand, I, Songora, the virility of my father, know more about war, have more plantations, own more cattle than any man in the land. And this," pointing to his little son, "my virility, will some day occupy the position which I, Songora, the virility of my father, have occupied since I was born. Come! Is there any man who can dispute this? Am I not great? My son, my virility, tells me that the son of Sagolia has boasted in the market place that he can shoot the moon with his wooden arrow. I, Songora, speak, I say to you that there is no boy who is the virility of any chief, who can shoot in the twinkle

of an eye the whistling eagle on the wing, as can my son. Come! I, Songora, the virility of my father Endella, say to you, it is a lie. I have spoken!" Then, having strutted three or four yards in every direction, he squats down on the ground and waits to hear who dares dispute him. Then with great chatter and ceremony another man arises, goes through the same braggadocio, and ends with a brilliant peroration to demonstrate the immensity of Songora's influence and caste among the chiefs. In this sort of thing they only reveal their utter childlikeness. They mean no harm, but it is the out-working of native vanity and a disposition to shine and bedazzle their people.

They have a certain kind of tenderness in their family relations, which is very touching. They are sympathetic in cases of illness to the point when there is no hope; then the sick, if not hastened into the hereafter, are neglected. They have not strong constitutions, and are subject to lung troubles, stomachic and febrile complaints, and paralysis. This is, doubtless, due to the excessive use of "pombé,"—a native drink, not imported by the white man—and exposure to the inclement and changeable weather. In the main they are planters and hunters, and the exigencies of their lives, the food they eat, the condition which makes them too often huddle promiscuously together, and their lack of drawing to themselves practical means of existence, has much to do with the *morale* of their natures.

A singular satire presented itself to me in connection with the people of Teita, who occupy a site which constitutes the gateway, and enjoy perhaps greater accessibility to the coast than any other tribe in East Africa, and who see all the caravans going to the north, or interior, or back coastwise, and have had some of the advantages of contact with the white man; they, however, are the most demoralized, occupying the lowest grade even from an African standpoint—of any of the tribes whom I met. They are dirty in their habits, have no pride, and are reduced for some reason or other to the lowest state of beggary; and their thriftlessness is possibly more observable from the fact that they frequently marry their mothers and their sisters, unable to exchange a sufficient number of cattle or other commodities necessary to purchase a wife outside their own families. This retrograde state of consanguineous marriage produces an ignoble yet natural degeneracy in their progeny; and yet these people have been in touch, as I have said, with the white man for more than fifty years.

Some tattooing is practised among the Wa-teita, and they distort and pendulate their breasts by weights. The women are very fond of ponderous ornamentation; they wear great

strands of beads, weighing sometimes twenty pounds, round their necks ; semsem, blue and red, with an occasional ornamental bead from other tribes. These are worn in such profusion round the neck that the chin is uplifted ; they also encircle the waist in the same manner. Their earrings are hoops of beads strung on wire, about six inches in circumference, worn in clusters of from four to twenty-four, in perforations on the upper edge of the ear ; in the lobes, which are more or less distended, little iron bars covered with beads, and having a pendant ornament of a Masai bead are inserted. They wear bead belts and occasionally a bit of cloth about their waist, and from constant contact with the Wa-nikia some of them have adopted an abbreviated kilted shirt made of blue kaniki, a cheap trade cloth. They seem to have less individuality in their general ornamentation than any tribe I met. This certainly reveals a weakness in their character.

Their plantations on the top of their mountain home revealed a certain amount of agricultural knowledge, and showed the result of constant cultivation. They raise wimbé—a species of millet—bananas, sweet corn, sweet potatoes, and some sugar cane ; also goats and chickens, which they bring down to the plains to sell to passing caravans.

Their few agricultural implements are of the rudest and simplest form. The soil is so rich that, after burning off the undergrowth, the soil is merely loosened with a haftless hoe, and scraped up into little heaps ; a little cavity is made with the finger, into which is dropped a few seeds covered over loosely with the ground, and nature is left to do the rest. Their planting season is anticipatory of rain, and the only further attention they give their crops after the seed is sown is an occasional weeding. In some particularly fertile districts they get three or four crops annually. They store up a supply in their huts, or use well selected trees covered, and almost thatched over with dried grass or banana leaves. These granaries, however, are not peculiar to Africa.

They have almost a Semitic idea of the values of their ware, and can drive as hard a bargain as any trader coming from the coast. They are insistent, pertinacious, and will dog a caravan fifty miles to effect a deal.

These people were so repulsive and so demoralized from their lack of personal dignity, that I confess I felt a strong prejudice against them.

The lesser tribes, living on the plains and side-hills, from Teita up to the foot-hills of Kilema-njaro are hunters, only raising what is necessary for their own consumption, when they cannot exchange with other tribes or passing caravans their game and

animal skins for food; they are most primitive in matters of dress when not absolutely naked. They have very fine bows and arrows, which they use with marvellous expertness; they fish when they can, work when they must, and, someone has said steal, when a caravan passes. I, however, had no such experience. They flocked down the mountain side and seemed to issue out of the interstices formed by the close-knit foliage of the trees interspersed by vines, out from the dense forests, and even seemed to spring out of the ground as if by magic, putting in an appearance above the long grasses, and seldom seeming amazed to see the white woman—bébé bwana. As though they had been lying in wait for her, they would come forth making some proffer of greater or less value, frequently in a timid hesitating fashion—not because they were absolutely nude, or with any sense of shame—but from the strangeness of the position, which evidently struck them in a peculiar manner, that a woman should be leading the caravan, and that there was no Ewana with her.

I received presents, sometimes of great value, from every tribe through whose province I passed, and their marked curiosity and delight when I would start my music box to play for them, and when I would appear before those of sufficient importance in my African court gown, their amazement and delight, their exclamations, their desire to lay their fingers upon the glittering ornamentation (which I always promptly and positively checked with the idea well instilled in my mind that it is necessary to keep the native at a distance and that one familiarity might possibly lead to another until some embarrassing climax might be reached which would entail upon me the necessity of forcible repulsion) impressed me greatly, and they would knot themselves in little groups, men and women exchanging ideas on the subject, which I only regret my ignorance of their particular dialect prohibited me from understanding. Their gestures, however, eloquently conveyed the general import of their speech.

As we advanced towards Taveta (lat. 3° 24' S.; long. 37° 40' E.) which is so well known that it seems almost an impertinence to offer any personal observations thereon, I found the people better acquainted with the fact that the white woman was coming than were others nearer the coast, and they came with offerings of bananas, sweet maize, bead ornaments, everything they could think of, and made proffer of these presents as I approached their barricaded province. And here allow me to say that I found so many evidences of the permanent occupation for centuries of this particular tribe, the Wa-taveta, in their forest home, that I

cannot admit that they have been a migratory people, although there are marked physical evidences of Masai origin. These people, who know no time when they lived elsewhere than in this pastoral region, having no tradition to indicate such an idea, are surrounded by a great majestic forest, and their gates are made by the interweaving of long forest trees, which must have been trained at least a century ago to have attained the impregnable appearance and actual size of growth we find here.

Their evident fear of invasion is not of to-day, but must have inspired their ancestors to so safe-guard their possessions, from the fact that thirteen of these fortress gates on different sides of the river and on different sides of the settlement form intricate and tortuous approaches, impossible for a stranger to thread with any degree of certainty either of attaining a fixed point, or the heart of a village.

Their childlike simplicity and peaceful attributes make their abode a haven for the white traveller to rest in and recuperate. Their display of ornamentation is most tasteful, beautiful, and varied. They have no heavy smith's work, but almost every man understands the art of what we would call in civilisation "*bijouterie*,"—and many delicate bracelets, necklets, and little bells for the ankles are manufactured. They tan, with some degree of skill, various skins, which are ornamented profusely with beads. They also make a specialty of a loin cloth for women, which surrounds the middle of the body with a long pendant at the side loaded with metal or glass beads and coloured with yellow clays.

In passing, let me say there is attached to these cloths, worn only by married women, a certain superstition, which is very curious in its import, as revealing an innate idea of faithfulness, if not tenderness, on the part of the woman for the man with whom she is associated. They have never been known to sell, give, or barter one of these cloths after having worn it until I procured the one in my possession. The reason for this is very rational, considering the people from whom it emanates; the idea being that if they should give to any *mzunga*—white man—the cloth, or if he should obtain it in any way, the woman would be under some sexual subjection to this man, that he could bewitch her, and at any time, wherever he might be, however unwilling the woman should feel, he could take her from her husband and her people to the ends of the earth. When I argued with these people that I was a woman, a *bébé* like themselves, that I could have no such magic over them, and that it would be a graceful thing for one woman to give another such an evidence of her friendship, they protested and

argued, always refusing; then, as I made firmer friendship with them, bestowing gifts and kindness upon them, possibly administering to them medicine if they were ill, the heart of one woman softened to me and she was willing to give me her cloth, for which I was quite ready and willing to give her material sufficient to make two others. Yet she wondered at this, that I, a woman, and the master of the caravan, could possess her cloth and yet not care to possess her. However, after many days' frequent consultation with her husband and all manner of blandishments on my part, she followed my caravan over fifty miles, and finally said, "Well, bébé, take it; you are my sister, take it." This is only to prove how much superior is the position of a woman going among these tribes to that of a man, however experienced he might be, and it is illustrative of many other things which occurred during my sojourn in Africa, revealing to me habits and customs, the family life and relationships of the natives.

They have a superstition as to the moon, sun, and water; it is with them a species of religion, though not formulated to such a degree of dogmatical accuracy as with other people, who are moon and serpent worshippers.

Their marriage is by capture. Their system of promiscuous intercourse previous to marriage rests upon a very singular basis. The maturity of the girl, at from eight to ten years of age, has certain moral disadvantages, for when she arrives at this age some young fellow of possibly seventeen, who has ceased to be a boy and has laid himself out to be an el Moran, or warrior, which he does by accepting circumcision as an evidence that he is no longer boy but man, may select one of these young girls, take her to his kraal—which is usually occupied by more than one warrior, each possessing a separate hut with a girl of his choice—and maintain her there. There is no stain attached to the girl's name any more than to the man's; she is eligible as the wife of any man in the tribe, or may be sought for by some adjacent tribe without any prejudice to her through her youthful relationship; neither is the man expected or compelled to marry this girl, nor is his partner debarred from so doing.

The marriage, like all marriages of chase or capture, is thus effected, the young warrior who desires to be an elder, mzai, or wise man, solicits the services of four friends. After all the necessary arrangements have been made, consisting of the gift of cows and goats, and sometimes a plantation, the girl is dressed in all her finery and all the young people of the village and friends from other tribes are invited to participate in the festivities. The four friends of the expectant bridegroom pursue the girl

who is soon captured with much affectation of resistance, and is conveyed to the hut of the bridegroom's mother, where she is kept a close prisoner for five days. During this time the young people dance and carouse and make themselves generally merry and promiscuously drunk, carrying the excess of their dissipation to such an extent that they dance until they fall down in a species of epileptic fit. The girl is now accessible to these four friends, and after this atrocious privilege has been indulged in, the legitimate husband claims his bride and they are then visible to all their acquaintances, become the recipients of gifts, and indulge in much dissipation.

This ceremony seemed entirely at variance with the simple gentle natures of these people, and I had much to say to the elders about it; and I think if the white people visiting Taveta could show them the disadvantages of this violation of nature's laws, they could very soon bring about a different state of morality.

The habit of caravans halting to string their beads in consequence of the profusion of the m'walli fibre, which they strand to make threads, keeps the people in a continual state of fête. The market-place is within the boma of the English post, and in order to collect the duties upon a caravan proceeding down to the coast, it was the rule when I visited the place that all caravans should camp within the boma.

They raise a very excellent quality of tobacco which they do not chew or smoke, but use as snuff. Their snuff boxes are highly decorated, are very beautiful, and the custom is prevalent with the women as well as with the men.

They raise quantities of corn, wimbé or millet, pumpkins, tomatoes, sugar cane, bananas, and have the advantage of a hand-mill, which has been established by the English in the boma, for grinding their corn and banana flour. This relieves them of the tedious process of pounding their grain in a wooden or stone mortar with a heavy wooden pestle, an advantage they seem highly to appreciate as the mill is never quiet. The women pulverize the meal with their babes strapped upon their backs, and the little one is quieted by the swaying motion of the mother's body. They are afraid of putting the babes on the ground on account of the white ants.

They manufacture also quantities of bee-hives, which are three feet long and a foot and a half in diameter, hollowed out, and with one puncture at the end to permit the ingress and egress of the bees. These hives are hung in the trees in the track of the bee ranges, where the flowers are most abundant. They use the same sort of utensil for brewing their pombé, which is made from sugar-cane, bananas, and wimbé, and when the mash is

fresh it tastes very much like unfermented mead or beer. In the course of three days the fermentation is of such a nature that it becomes a great intoxicant, and, as it is profusely brewed by almost every native of the tribe, they are in a perpetual state of jollification, and the unamiable qualities and propensities of their natures seem strangely to be affected by this intoxicant. It is a mistake to say that the Africans have been polluted in this respect by the invasion of white men, because they have always, as far as one can ascertain, used pombé and tembé.

At Taveta their personal decorations are considerable and the young men are much given to dressing their hair in a very quaint fashion, drawing it in braided clumps hanging down over the face and divided over the back of the head, falling over the shoulders, which they plaster down with red clay, to which they frequently add bead and metal pendants. These young fellows, who represent the Taveta snobs, also tint their bodies with the same red clay. They are very self-conscious and great posers—the very princes of dawdlers and slaves of fashion. They seem to divide themselves up into little be vies, and they wear as insignia of fellowship or brotherhood small armlets made of strips of cowhide, upon which are sewn beads in special devices, which seem to indicate their particular faction or club. They are great dancers and merrymakers; the young fellows will collect in groups and dance as though in competition, one with the other; one lad will dash out from the circle of his companions, rush into the middle of a circumscribed space, and scream out, “Wow, wow!” Another follows him and screams; then a third does the same. These men will dance with their knees almost rigid, jumping into the air until their excitement becomes very great and their energy almost spasmodic, leaving the ground frequently three feet as they spring in the air. At some of their festivals this dancing is carried to such an extent that I have seen a young fellow’s muscles quiver from head to foot and his jaws tremble without any apparent ability on his part to control them, until foaming at the mouth and with his eyes rolling, he falls in a paroxysm upon the ground, to be carried off by his companions. This method of seeking artificial physical excitement bears a singular resemblance to the dancers of other nations outside of Africa. I do not propose to make deductions, but I think there is considerable opportunity to study comparisons as to the motive which prompts various people to engage in this physical excitement. It would seem to emanate from a species of voluptuousness.

The women also engaged in dances, and during their wedding festivities, bedecked with all their fine bead-work, they separate

themselves from the men and follow in a procession, one after another, with their hands upon each other's shoulders or hips, singing a strange monotonous plaint, now and then interlarded with shouts of laughter when they resume their procession, jingling all the bells they have about them, and going round and round, threading ways through the forest back again to the boma of the host of the ceremony, drinking and carousing quite as much as the young fellows. A certain amount of dignity is put upon these gaieties by the presence of the elders, but there seems no viciousness in any of their games and pleasures. They have a certain amount of animation and youthful exhilaration, which expresses itself and expends itself in this way.

They are very jealous of each other in their attentions to the white man, and seemed particularly so respecting myself; one family bringing me milk and eggs, and seeing that somebody had anticipated them, they immediately would commence a tirade as to the bad quality of the other's gifts and recommending their own with great vivacity. However, they were so pleased to have the white woman with them, that there was nothing among their possessions which I really desired, that in the end they did not give me. Of course, it is well understood that these gifts were always reciprocated by me—if not in kind, certainly in excess of value—but that does not in any way detract from the fact that they were willing gifts and presented with a free, open hand, without expectation of return.

At Taveta I met a woman, whom I called "the woman of Taveta," who was in sore trouble. Immediately upon seeing me—if I may use the expression—she took me into her confidence and all her troubles were poured into my ears, and she so engaged my interest and sympathy that it was a delight to try and assist her to some better state of daily existence, which would preclude certain trials she was subjected to. She was a woman of intense feeling, a lover of power—indeed she was a leader among the women, and the wife of one of the elders. Her word seemed to be almost beyond dispute with them all. This woman was so eager that I should be a witness of all her tribe's strange customs and habits that she gave me the open sesame to them all, and even at midnight, when the moon dances were taking place, she would steal to my tent and take me off through the forest to witness them, unseen and without their knowledge. I was thus enabled to become very familiar with the customs forbidden to be witnessed by the white man. Among others I saw a funeral ceremony in which the child was thrust in a sitting position amidst faggots of wood and burnt. Meantime, the men formed an inner circle and sang a monotonous

chant, while circling round the fire, whilst the women formed an outer circle and moved in a reverse direction as if in answer to the laments of the men; at stated intervals they would make a sweeping salaam, and while the head was yet bowed would utter a plaintive wail. The little one was soon consumed; the skull was taken and placed in an urn which was put into a hollow tree; the little bones were gathered and dispersed through the forest, evidently in places already established for the reception of such sacred remnants of their deceased, amid the tree trunks, but not under the earth. They have a strange idea that the dead pollute the ground. This habit of putting the bones of their dead under trees, accounts for the suppositions that there have been murders, or that disease has ravaged the country, when the bones have been found by caravans. They also have another custom of burial, which is very obnoxious. In a select spot a little remote from their bomas, but well surrounded by thorn bushes and trees, so as to be beyond the observation of passers by, they place certain parts of the remains, usually the head and entrails, in rude pottery urns, which are laid over on their sides, and they are allowed to fester and decay until there is nothing left but the whitened skull.

The superstitions about death are somewhat obscure, and are heterogeneous—if I may so say—but there are little threads, (of varied origin) which may be traced throughout the whole of their religious ideas. They worship the moon and the sun and revel in the rain during the planting season. They have an idea that the preservation of the skull preserves the spirit of the dead, and that the congregation of the skulls of a family or tribe guarantees a future reunion. They avoid letting any stranger know of the death of one of their tribe. If a familiar face is missed, and an inquiry is made some one promptly says, "He has gone on a journey,"—doubtless to the great hereafter.

Elders strut about in a majestic way, with as much cloth as they can afford about them, many of them wrapping themselves in twelve or fifteen yards of American or common white drill, which trails behind them, and they have infinite grace both in manner and speech.

Almost everyone in this Taveta community or tribe carries a pombé cup, made from a gourd, to which is affixed a long handle, sometimes beaded, sometimes ornamented with metal rings—the cup itself frequently bearing devices, the origin of which would make a very interesting study. I traced many of the designs as having come from the cups which the porters make when on "sofari"; sometimes they were

Turkish, sometimes even Persian and Egyptian. I have in my collection the first attempt I found of the representation of the human form, and quaintly enough, the white man is demonstrated with awkward lines as wearing shoes, and an attempt is made to represent his clothing; whereas the native finds a prototype in long lines which represent bare feet, and a certain sweep and cut in the figure to represent his nudity.

They have a horror of having their pictures or photographs taken, and are very much given to the idea of witchcraft. There are certain beans and bits of wood or iron, which they wear as charms both to ward off evil, and as "dama" for various complaints. They are very loth to part with these beads, beans, or bones. They will lend them to one another, when suffering, but always reclaim them when their friend has been cured. With some difficulty I procured a string of these beads from a magic doctor who had lost caste in consequence of the misfortune which befel him through his ministration to an elder who died under his care, hence he desired to capitalise his stock of charms and make haste to the coast.

I found they were very eager to possess the needles and reels of cotton thread with which I had provided myself; they had never seen a thimble, and when I showed them these thimbles they said almost immediately, "Finger hives," seeing an analogy between the thimble and their hives. Then, upon discovering the little indentations, they turned and said, "They have had small pox." Scissors, razors, and clasp knives they were delighted to receive, as also hand mirrors. In this they differed from some of the other tribes which I shall mention, who considered the possession of mirrors as an ill omen, and refused to receive them.

I was also taken to their bomas on many occasions, and although I found it most difficult to breathe within these enclosures, with a fire always burning in the centre of the room and their cattle stalled in one part, yet I never refused to enter, in order to show them that I respected their habits and customs and was most interested in everything they did.

They dry fish and jerk beef, which they cure by hanging in their huts, exposed freely to the smoke of their fires.

An elder of strange intelligence and standing told me that the fires were never allowed to go out, that is, in the village; a special family fire could go out, but this could be re-supplied or re-ignited by getting a blazing faggot from some friend's fire. But in the history of the tribe they had always preserved the fire, as doubtless did their prehistoric ancestors. On a march or when hunting or visiting from tribe to tribe they all carry with them fire sticks, which they deftly use. They also know

the use of flint, and by scraping the fibre from the mahwali or other fibrous trees they make a tinder which is quite as capable of ignition as tow.

The children are very skilful in the use of bows and arrows, and when I presented them with fish-hooks they would, to please me, use them at the end of a reed pole, but no sooner was my back turned than they would resume their old practice of getting a fish by shooting it in the water or by using weirs.

The forest of Taveta, as well as the mountain of Taveta, and the ready access to the plain or bara, give these people ample scope for their plantations and fodder for their stall-fed cattle, making it almost an independent province; and although it is said the people are of Masai origin, they are so gentle and peace-loving that I could but doubt the supposition, always reverting to the fact that their environment showed a long line of people of like disposition. For the moment there is considerable friction between the young men, the elmoran, and the elders, in Taveta, on the matter of hongo or exacted tribute from caravans passing through their country. This has been abolished by the English Government in their province, also by the Germans in theirs, but it is evaded by the natives impressing new-comers with the idea that they will receive advantages by giving them presents. In the old days the elders received these and made distribution as it suited them, but now the young men desire to receive this tribute, when they are able to exact it, and they are continually holding palavers between themselves to determine what course to pursue. This, however, is short-lived; and the Government will doubtless succeed in totally abolishing it, as it is an imposition and an indignity. I may here mention that I paid hongo to no tribe in my peregrinations in East Africa. When I was approached respecting this, I said: "I am your guest; I am a white queen coming to you. Would you ask hongo of the sultan of such and such a tribe should he visit you?" and it successfully relieved me from this custom.

They are very careful as to the quality of the cloths they receive, and although their eyes are very much attracted by the bright colours, you will see them take a piece of cloth and hold it up to the light, as a test of its texture, and if it is too thin they will not take it; the old habit of forcing upon the native any trash, as good enough in East Africa, does not now succeed.

They are kind to their children, and I found no children in any tribe in Africa, after the age of six; they were then little men and little women, who daily trudged to the noonday

market with a load upon their heads, happy and delighted to be working with their parents, and the only child I heard cry during my expedition in Africa, who was not a baby, was a little one who, being prevented from going to market, howled, kicked, and yelled in such a manner that I paused to inquire the cause of distress.

The complete freedom with which the men and women mix together, and the homely intercourse between parents and children, reveal a trait of their social life that is most genial and certainly unlooked for. Possibly, this leads to a certain amount of familiarity with matters and things removed in civilisation from the knowledge of the youth and the maid; but then one must admit that natives are "naturals," and that ignorance with them is as much a crime as innocence is a virtue in civilised communities. Although they are not in any way purists let me say I saw no manifestation of licentiousness, except in their dances, in Taveta. In talking with them as to the invasion of their country by the English, and the benefits to accrue therefrom, they would answer rather dubiously, "Aie, aie; yoh, yoh," and I discovered a tinge of regret, and in their hearts I believe they would be content to go on in their happy, pastoral way, without troubling their minds about education, government, and all the confusing principles of civilisation. They live to enjoy and enjoy to live, and are as idyllic in their native ways as any people I ever encountered.

While at Taveta several of the adjacent tribes sent deputations of young men and young girls to dance for me or give me conduct back to their provinces if I would go, bringing usually goats or sheep or some similar present to prove their willingness, and Miriali, of Mungu (lat. $3^{\circ} 34' S.$; long. $38^{\circ} 41' E.$), was constantly sending me envoys with presents, entreating me to visit his province before I visited Mandara his rival. I mention these things simply to show they are hospitable and generous notwithstanding their tribal jealousies; and while my statements are in such contradiction to reports that have been promulgated by other travellers, and which I do not doubt was their experience, it tends to prove that you must not "rub these people the wrong way" if you would know them at their best, any more than you would civilised races.

Although the young girls are very beautiful in figure, their faces are not so attractive as in some of the other tribes of the high lands, and I came very near being betrayed into supposing that certain scars upon their bodies were the result of tattooing; after some investigation, however, I found that they resulted from cupping, which they resort to for their headaches, or any other ailment, in fact no matter what malady

afflicts them, they are great bloodletters, and the simple methods they employ I found might be useful even in civilised countries. They excoriate the surface with a little knife, or a piece of flint, or a piece of wire, and then place over it a gazelle horn with the pointed end cut off; they then apply suction by holding the horn firmly against the part cut and drawing with their lips the blood. If the malady is serious they make several applications, taking as much as an ounce and a half of blood from the sufferer.

Some of the wives in Taveta have filed teeth, which is not a custom with the Wa-taveta tribe, but indicates that the women have been married from other provinces. This leads the casual traveller to suppose it to be a tribal custom. They frequently colour their teeth, their finger-nails, and the palms of the hands with a red stain procured from the "she-dragon shrub"; but, as a rule, they keep their teeth beautifully polished with tooth sticks.

Arab and Somali caravans bring up from the coast nutmegs, which are carried by the porters and natives as charms and used to allay fever; they form one of the important stock medicines which every nepara or headman carries. They use in great profusion pepper, which grows wild, and are very fond of eating raw plum tomatoes; these latter are very delicious, and have the flavour of the cultivated tomato. They roast ears of maize by their fire-places, which consist of three stones canted inward so as to touch at the top. The maize is also eaten raw, and is palatable and nutritious. When they have no salt (which they always crave) they use chumvi stone; this has an alkaline flavour and answers very well as a substitute. The butter they make from cow's milk is very white and waxy in appearance, and with a strong flavour of banana, as their cattle during the rainy season are usually fed on the banana leaf and on the bananas that are unfit to keep or eat. They also make goat's butter, called *gee*: this is strong in flavour and is very oily. The meat of their sheep, which are of the fat-tailed species, is very strong, as is that of the goats. The beef is more or less tough. The chickens, strangely enough called *kukuo*, are very small and sinewy. The natives frequently sell a chicken, a hen that is laying, with the proviso that the eggs laid for four days, or according to arrangement, should be theirs. It is a very quaint custom to string these chickens upon the pole carried by the cook's mate, together with pots and cans, and a cloth is kept fastened under the chicken so that if the hen lays *en route* the egg is preserved. In order to make sure that the purchaser will not defraud the seller the latter sends some boy of the tribe to follow the caravan three or four days, in order to take the product on the spot.

They tan the skins of animals in a very admirable and sometimes unique manner. Aloe juice is placed upon the surface after the hair has been shaved off, and they then hang them up to dry in the sun, first carefully rasping off all the fat and fibre. Frequently they cut or shave the skins, leaving lozenge-shaped squares as decoration, which are variegated by the bare places, and these are very much affected by the el-mcran. They also make a species of chamois leather from the goat-skins, softened by friction and grease. Their animals yield them a great deal of fat; this they value highly, and, with a little instruction, they could soon be taught to make soap and ointments, these being much needed medicaments.

They use the cow-hides for making loin cloths for the women, making shields and little three-cornered decorations which they sling across the dorsal part of the back with no apparent purpose except to brighten and whet their knives upon, or for mere decoration. These hides they sometimes embellish with little rows of delicate beads, sometimes metal chains, and at times leave the hair of the animal upon them. The lads carry most artistically modelled wooden spears, in fact a perfect counterfeit of the Masai metal weapons, and the youths are always posing as prospective warriors. They are experts in the use of bows and arrows.

The men, women, and children are all good swimmers, but they use very little water to keep their persons clean, substituting instead grease, and in spite of all of its nutritive and cleansing properties, by the aggregation of the red clay they affect so much, the decomposition of the oil renders them rather odorous when the fat becomes rancid.

The women shave their heads with the exception of a little cushion or pad on the top from which they allow to grow one or two long strands, which are strung with beads; and at times they plait with beads the entire mat of hair into little pig-tails. The men frequently adorn themselves with head-dresses made of cows' and calves' stomachs stretched into shape when warm and pliant soon after the animal is killed; these hang down over their shoulders from their foreheads completely covering their heads, and are variously garnished with beads and delicate metal fringes.

They affect great masses of pewter bracelets and bead arm-lets and leglets. The women universally wear a beaded belt of a set pattern, and many of those who might be designated as "the rich" wear quantities of beaded fringes about their waist, with long strings of metal beads of copper, iron, and brass.

There were several ostriches belonging to the English post. It seemed very strange that the natives never became used to

them, seeing them as they did daily—but dozens of times during the day, when the natives would pass through the boma and the ostriches would flap their wings or rush at them, they would fly in clamorous terror.

They had one or two games, like pitch and toss. The children amuse themselves, as do other children, vying with each other, shooting birds with their bows and arrows, which they succeed in doing with great dexterity. They have some idea of forming companies and drilling, having a leader whom they are disposed to follow. Their education is one of imitation, and not of instruction. They are impressionable and observing. Their reasoning faculties would naturally be quickened and vivified by being called into play, although at present they are at times somewhat slow to comprehend innovation in their old habits and customs. They are afraid of monkeys, and the lemur makes frequent nocturnal visitations to the settlements, to the distress of the people.

There are in parts of these woods the most beautiful butterflies, and some bright plumaged birds.

Many of the men wear upon their arms jaw-shaped armlets, which are placed upon the upper arm in youth before the muscles are developed, and become imbedded in the flesh to such an extent that removal is almost like amputation, so painful and difficult is the operation. Upon the three arms from which I took the armlets I have in my collection, the scars were so pronounced that the owners of the surrendered armlets insisted that they should have enough metal armlets to cover the scars. The wearing of these bracelets may possibly have had a phallic origin. I was told by an elder that the figures graven on the reverse sides of the armlet represented the male and female organs of generation, and that the armlet itself was of moon origin; this was all I could learn from them. But considering that the moon was the goddess of the Phœnicians, and of many of the mercenary peoples who served the Phœnicians, there seems something at least to investigate and that a close student may draw some conclusive analogy. Since offering this idea I have had placed in my hands by Frederick Taylor, an American traveller, a silver ring presented to him by the late King Ja-ja of Opobo, West Africa, representing, as he was told, a shark's jaw, which is identical in shape with the East African armlet, but displays no distinctive ornamentation, excepting a little rosette, or flower-form, on the articulation of the jaw.

In common with other tribes, they have a great horror of insects and of all creeping things; and there are unfortunately many small vipers, a few pythons, and some puff adders. One

of the porters of my own caravan was viciously bitten in the foot by a viper while cutting grass on the plain.

They have, too, a horror of rain falling upon their bodies, and use the broad banana leaves as Arcadian umbrellas.

Upon leaving Taveta, the people congregated about me and exacted a half promise from me to return some day; and I felt a qualm of regret in leaving these people—these children of the forest—without having made some close tie, which would ensure after-communication with them in the years to follow.

The next people of interest I met were the hostile Warombo. These people are divided into several factions or clans, but those that are most dreaded by the caravans were the Rombochini. Until I started to visit Lake Chala (lat. $3^{\circ} 18' S.$; long. $37^{\circ} 39' E.$) they had never admitted a white person to their village, but they flocked down from the mountain side to see "Bébé Bwana," and were most eager that I should accompany them back to their village. After a general conference with my headman, it was deemed unwise and undignified, and that by so doing I should in a manner lose a certain prestige, not only with my caravan, but with the natives; it would be a condescension for me to visit a chief who had sent me no present. When this fact was established in the minds of the Rombo, the present was forthcoming, and during a quiet hour in the afternoon I went with my headman and interpreter to visit the chief, who was ill in his boma.

They are very unprepossessing people. Their industries consist in capturing big game, in dressing animal skins, jerking beef, some little agricultural pursuits, the making of their bows and arrows, and hunting. They use fire arrows and poisoned arrows.

These people were in a state of absolute nudity, and were as unconscious of their condition as the white man would be with his clothes on. Their habits of polygamy are the same, and from all I could ascertain, their superstitions, and customs are similar to those of other tribes in this region. They occupy the hills sloping down to the plain, which is the thoroughfare of caravans, and are in such close proximity to Taveta, that they have some ideas of trade. However, when they found that I intended to descend to Devil's Water, as Chala's Lake is denoted, they made speedy retreat to their villages, with a feeling of horror that the white woman would dare venture into the very mouth of the Devil himself, thus instead of being troubled by their curiosity, in making an adventurous descent to the water's edge, I was perfectly secure, and spared an awkward intrusion or possible panic.

The descent and circumnavigation of Lake Chala has nothing to do with anthropological matters, except in so far as the super-

stition which hangs over it may lead to an insight as to native credulity and simplicity. It is believed that the Masai had a village where the crater lake now swells and gurgles, and that during a volcanic upheaval of Kilema-njaro the people and their herds and poultry were blown into mid-air, and that their spirits still hang in space, without home above or below, and that the moaning and sougling of the wind through the trees and the strange rustling and mysterious noises that come from the reverberation of sound from the rocky cliffs which surround the lake, proceed from the spirits of these poor people, their cattle, and poultry. Although fish abound in great quantities in this lake the natives could not be induced to taste them. They visit lake Jipé and regale themselves with the flesh of the hippopotamus, but although they eat crocodile flesh they would go hungry rather than taste the products of this limpid Lake Chala where they might easily obtain plenty of these reptiles. It is a question how this craterlake becameinfested with crocodiles. The creatures could not have emigrated from the waters on the plains, and up the mountain slopes to this point; nor have I found any reports of their existence higher up in the mountain waters, which would possibly furnish the theory that they drifted down through some subterranean channel. The source of their presence in Lake Chala is at present a mystery.

On reaching the people of Khé (lat. 3° 29' S.; long. 37° 26' E.), the stamp of the highland life of the characteristic Chaga races was manifest in the natives. They carried themselves with a majesty of mien and had an imperious way of asserting their importance over lesser tribes.

They have a curious superstition in connection with the Colobus monkey, which I found among no other tribes. They believe that their ancestors inhabit the bodies of these creatures, and under no circumstances whatever will they kill or knowingly permit to be killed one of these beautiful apes; and on approaching the forest where the monkeys abide in great numbers, there is an odd silence and furtive glances, as the natives pick their steps with precaution and almost hesitation, that would seem to indicate an honest belief in their superstition.

They use bow and arrows, and spears when they can get them. They have some plantations, do some hunting, and a little blacksmith's work. They use various furs to protect themselves against the cold, and their houses are rather of a better order and of more artistic shape than those previously seen.

From this point I took guides from the tribes, with the idea that I would hold these guides in case of attack or hostility, as hostages, and with the first tribe that made an assault on me or

my caravan, I would punish them in some unmistakable manner that would stand as a warning to all further aggressors. They were also useful to point out difficulties and show the more accessible paths. Before I completed my journey, I had forty of these half-prisoner guides, who were perfectly happy in their unconsciousness of the motive which actuated me.

The people of Useri (lat. $3^{\circ} 6' S.$; long. $37^{\circ} 39' E.$) were somewhat disturbed in their minds upon the appearance of the white woman's caravan. They were under German protection, flying the German flag, and hesitated to give me the welcome other tribes had extended. I sent two messengers to the sultan's boma, saying I would await him half-an-hour, or, as they quaintly say, until the sun is there, pointing to a special place in the heavens; and while I was awaiting him it gave me a little opportunity to study the people.

The women were decorated very much after the fashion of the Wa-taveta, with the exception that they wore from a clumped piece of hair in the centre of the forehead little circular ornaments which hung down over the nose; and some of them wore around their heads metal chains, which hung like fringes to their eyebrows; their ears, into which were thrust beads and pods and long pendant rings, were pierced in many places. The men were shy and had a hang-dog look about their faces, which might have arisen from their recent subjugation by treaty by the Germans, and the presence of German soldiers in their midst; they seemed uneasy and on the look-out for a surprise.

The sultan did not make his appearance at the stated time, so I moved on, only to receive, when five minutes out of his province, a message by his prime minister that if I would return he would receive me, and that he had some fine presents. I promptly said: "The white woman never returns. If the sultan of Useri wishes to see her, let him follow her to the next encampment." This resulted in his sending after me a meagre amount of presents, which I did not accept. In any country but Africa, this would assume the appearance of surliness or contempt on my part, but in Africa the prestige of the white man or woman must be maintained—by certain conventionalities, which are well known—with all the natives.

We passed the fountains of Useri, which are more in the name than in fact, and more like pools than fountains.

From this point, passing through many villages and small tribes, I directed my course to Kilmangelia.

These people, the Wa-kilmangelia, had been very chary of admitting strangers to their forest village and had kept close guard over the entrances to prevent any caravan, especially a mzunga, from entering their dominion. It had been customary

for these people, from time immemorial, to go down to the plain and barter with the caravans; and although it was disputed at one time that the liberty that was permitted to me in Kilmangalia was any different from that bestowed upon other caravans, I have only to say that, by order of the sultan, I was permitted and invited to make a road through their forest into their village, and was there allowed to see their craftsmen at work and to observe many of their customs; and also to hold shauri with the sultan, who was paralysed and found it impossible to come to my tent. He placed at my disposal their picturesque, circular, palaver ground which was a clearing in the centre of a village which overlooked the plains of the Masai land. While in this encampment the Masai warriors came as envoys from their people to inform me of the condition of the territory beyond, and I saw a thousand Masai, armed and ready for battle, having as an objective point the German territory around Arasha-jue which they had been forced to evacuate by the Germans.

At first, the Masai, on entering Kilmangalia, to visit me, were disposed to be very hostile and tried to exact hongo, and when I promptly replied, I certainly should not pay hongo to Masai in Kilmangalia, they became very inimical and made a good many blustering threats of what would happen to me if I ventured on the plain. However, in a few days the edge of their antagonism was dulled, and the Masai wives came to me, bringing large pieces of what they called Tobacco Stone, a soft alkali stone—which they powder and mix with their tobacco for snuff—and also salt stone, *mchumira*, which they use as a condiment with their food.

Before leaving the Masai I was enabled to get many of their characteristic articles, such as a vulture feather panner, vulture feather shoulder capes, dancing masks of various kinds, shields, swords, and a collarette made of cropped ostrich feathers stuck through leather, so that the quills make a rough surface on the inner side; this is worn only by the warrior who has killed twelve persons, and resembles in theory the robe of Janus, as the roughness on the inner side produced by the quills ex-coriates the surface of the neck of the wearer:—the warrior who gave me this collar had the blood streaming from his throat to his waist. One warrior presented me with a wooden case filled with ostrich feathers, which he carried with him to replace the feathers in his warrior mask and for other decorations. I bought several of the cow-skins worn by the women as clothing, and for bedding at night, for the cold is extreme. They presented me also with a dancing wand, and one of their nebara or cloths made of strips of white cotton

embellished with red, of various designs, and which they sling from their shoulders; also a Colobus monkey tail, which they wear under their knees over the long oval bells, and a hyena tail decorated with a lion mane and Colobus monkey tails, which they suspend from their shoulders as an emblem of war.

There is a great deal of bluster about these people, and although, as I have said, they are the bogey men of Africa, I think anyone of nerve and self-possession need have no fear when they threaten immediate attack. A warrior came rushing up to me with his spear and planted it into the ground before me, and screamed, "Woh, woh!" I reached behind me and seized my gun and rushed towards him and said, "Woh, woh!" Suffice it to say, I own that spear!

A youth stole the ground cloth of my tent, was caught, chained, and brought one day's march after me. His relations gave as ransom after returning the cloth, a cow, two goats, and a quantity of fruit. I handed the youth over to the Germans, but pleaded for mercy, being touched by the heartfelt agony of his old mother. He was freed after many promises on his part, after receiving five strokes, and came rushing to me full of gratitude, prostrated himself flat on the ground and tossed at me armsful of grass, offering to carry a load, and this quite voluntarily—for a day or more, to evince his gratitude. I cite this to show that the natives are capable of feelings of contrition, as well as of gratitude. As another proof of their sentimental nature, a little maid from Kilema seeing I had no rings upon my hands, murmured very deplorably, "Poor Bébé, no rings." With a sudden accession of generosity she slipped from her own fingers her numerous metal rings and exclaimed as she proffered them to me, and I placed them on my own fingers, "*M' zuria sana*"—very beautiful—and settled herself back upon her heels admiringly gazing at me, with her own denuded hands clasped across her abdomen. Fortunately I succeeded in taking a photograph of her at this juncture.

These Masai are true warriors and raiders. They keep a subject tribe, the Wa-rombutta, who do their hunting and what meagre agriculture they indulge in. This tribe is insignificant in appearance and, although servile and subject to the Masai, are not slaves; they present almost the appearance of dwarfs. I saw no man amongst them who attained a height over four feet and a few inches; most of them were very much smaller.

The Masai know no law but that of capture, and attack the Taveta with much animosity. Their habit of forbidding passage through their territory is effected by placing in the middle of the path, over which an individual or a caravan must pass, a

bullet over which they cross two twigs stripped of foliage, with the exception of a tufted top; the first person crossing this barrier is usually speared or shot. Not knowing of this custom, I inadvertently came to such a barrier and kicked it aside, when I was seized by one of my headmen, who held me back, informing me that if I crossed that point I should most likely be assassinated, and in a moment about thirty young Masai warriors made their appearance in a great state of agitation, with frantic gesticulations announcing that I must pay a certain amount of hongo for the depredation I had committed. However, these people were soon satisfied with a few lumps of bluestone—which they prize as highly as donkeys and cattle—not as a penalty, but given to them as a present, for I felt that if I failed to recognise, in such a slight manner, their arbitrary right of prohibiting me from entering their country, it might in the end result seriously, not only to myself but to other caravan leaders.

The women paint their faces white with red streaks, and sometimes wear a close-fitting cow-hide hood, which is embellished at the edges with iron coils presenting a most ghastly appearance. The men also indulged upon occasions, more or less frivolous, in paint and decoration of the body, by daubing on splashes of colour. Their hands and feet are excessively small. This I also found to be the case throughout all the Chaga tribes.

It was with great difficulty I succeeded in getting instantaneous pictures of any of the tribes. They regard a camera as a species of witchcraft, and are put to flight the moment they see a square box held up before them.

In Kilmangelia they were willing to bring great calabashes, holding two or three gallons of pombé, fresh brewed, as well as quaint hide-bound boxes with neatly fitting covers, holding about two quarts of honey; these would be placed in front of my tent in long rows, as an offering.

The principal men of the tribe would sit by the hour round my tent while my musical box would be playing, and, waving themselves backward and forward, repeat: "God! god! god! give us rain! god, give us cloths!" until I began to feel that my resources in the way of exerting influence with the supreme power were very much over-taxed!

A messenger visited me at this place, to say that if I would come alone about five miles from that point, he would show me something that no white person had ever seen. He was not a Kilmangelian but of another tribe. Here they showed me a stone spear-head, the exact shape and size of the Masai spears, which was kept buried and was unknown to anyone but the

chief and one or two of his prime ministers, and which passed in line of descent from chief to son. I asked him how long it had been in their possession. He said, "Since the sun made day and the moon lighted the night." I further asked, "Was it before Kilema-njaro spat the fire?" He replied, "Oh, long before that." He begged of me not to reveal the place of hiding, or the name or province of his tribe, as he said the "Ditch" (?) would take it from him, but it illustrated a very important point in the history of the origin of these people.

One day quite inadvertently, while my men were halting, according to my habit I was strolling about to get away from the din and confusion, looking at the flora and fauna; after reaching a point about half a mile from my caravan I stepped upon what seemed a firm surface and fell through a perfect screen of vines and shrubbery into a cave. I have brought pieces of the stone which made the body of the cave and a small piece of the stone mortar, which stood in one corner concealed by its cover of moss and lichens, so long had it been undisturbed. The cave was of an irregular oven shape; part had been made and part was natural; it undermined the surface of the earth above it, which came over sharp to the edge, and then the vines fell as a pent obscuring the entrance. It was about four feet square and five and a half in height, and evidently had been a smith's workshop. There were several stones up against the wall, upon the floor, which seemed to have served as forms to sit upon and one that must have been used as an anvil, bore the abrasions of heavy blows and was much discoloured with smoke. I was so eager that no one should discover me in this cave that I hastily withdrew, fully intending some day to make fuller investigation as well as to search elsewhere for similar evidences of the Stone Age.

Here allow me to digress and call attention to the excavations at the foot of the hill upon which Mandara's boma is founded, which I entered, only to be recalled by the warning of my headman, before I was able to make a full investigation.

The features of all these people, well illustrated in the pictures I took, are anything but negroid, but are more Egyptian. Their heads are long, their brows well-fashioned; and with the exception of their noses with the open inflated nostril, there is a certain amount of symmetry in their lineaments. They are, from all I can ascertain, of an entirely different origin from the peoples on the coast, central, or west side of Africa. There remains no evidence of cannibalism, if it ever existed, although the warriors of various tribes drink the hot blood of the bullock before going into battle, and eat raw steaming meat hacked from live creatures; but they do not eat human flesh. They also make

incisions into their wrists, and suck their own blood to put heart into themselves.

The use of grass as a sign of truce is more general with the Masai than with any other tribe I met, possibly from the exigencies arising from warrior habits, and part of the equipment of the women is a bunch of grass, which they fasten to their cow-hide belts or under some of their iron rings, in order to have it at hand when an occasion arises to manifest amity.

With these tribes the doctors are usually men, but all midwifery is done by old women. The women, as a whole, are healthy and realise their maternal vocations with but little suffering. Relative to other generic functions which are incumbent upon all women, they observe the greatest delicacy and are more than modest.

In pointing out a direction, instead of using their fingers, or nodding their heads, as we do, they point with their tongues; and the Scotch and Irish habit of spitting upon a gift for good luck is here carried to a vast extent. They even proffer their faces to be spat upon as an evidence of your good feeling. They never kiss. Moved by tender sentiment they may be seen to clasp the palms of their hands spasmodically, impetuously unclasp them and then press them upon the person they yearn to manifest their affection towards.

They brought me a white goat of peace, which was killed in my camping ground, and then made blood-brotherhood with me. This has been so often described it seems useless to speak further about it, only it has been described with a certain amount of disgusting detail, which certainly, in my experience was omitted, if it is even necessary upon other occasions.

In medical matters they are very primitive. They use many of the native herbs and the fruits of some of the trees, but are ever eager for bluestone, as they suffer from inflammation of the eyes, caused by exposure and doubtless specific diseases in the blood, as well as the acrid smoke ever befouling their huts, which have no outlet for its escape. And here, let me say these specific diseases are frequently endemic,—not importations in all cases; for tribes who have never intermingled with the white man's caravans give strong manifestations of venereal diseases, and in no way can they be traced to the invasion of other people in their country. In this I seek verification by reference to Dr. Parke's assertion.

Blackberry vines were in great profusion, and the berry, which was already formed, but which was not yet ripe when I was in the country, seemed most luxuriant and large. In this particular region there is a plant which looks very much like the currant; it is called "grape" by the missionaries. There is also an edible

fruit bearing strong resemblance to dried apples, also sugar-cane everywhere.

I saw numerous flint or stone rasps—flint usually—for shaving the head and face as well as other parts of the body, and also used for denuding the animals' hides of hair. They also use flints when they have no knives to excavate their wooden dishes and bowls, and as tree choppers.

There is a certain distinction in the women's costumes, which is as significant in import as the sleeves of the garments of the Japanese women. A woman who is dissolute usually wears the garments of the coast tribes and is more or less tabooed by the more virtuous among her own people. This too from no high sense of morality, but from the reason that the declassed woman has bartered her favours to the porters of the caravans; herein resides the secret of her disgrace.

Their ideas of hospitality are of a very singular character. If one sultan visits another, or any man of importance visits another, or even friend visits friend, in the Chaga tribes, the one visited puts at his friend's disposal one or more of his wives, and gives him the general freedom of the boma. These civilities are common, and interchanged all through Chagaland.

While on my way from Kilmangelia to Mireali's country, going south, I saw one or two Albinos. Their hair was not the yellow discoloration which one finds throughout Africa, produced by the application of lime, but was white and flossy, and the eyes were of a very, very pale pink, much like white rabbits', with a sickly, unprepossessing shade over the face that has no place in the gamut of colour. They look dejected and mean, quite deficient in the elasticity that most of the natives present. They were very shy, and refused to hold communication with any of the interpreters or with me. I proffered them presents; they would not take them, but ran away and hid in the adjacent bushes. Their teeth were filed into points and discoloured. They are low of stature and with sloping foreheads, looking much like Aztecs, and seemed, from all physical indications, to be the most degraded Africans I met. What tribe those people belonged to I could not learn.

The keen sight of the native is amazing. Frequently they would say, "Bébé bwana, very soon is such a mountain," and I strained my eyes into the long distances of space, unable to detect the slightest indication of a mountain, or the appearance of a caravan they might speak of; neither could I with my field-glasses descry anything I could so name. However, in the course of a day or two's march, we would encounter this mountain. There is one thing to be said on this point. May they not be so well acquainted with the character of the country, and by

traversing it so frequently have they not learned that the caravan of the white man marches at such and such a speed, and is likely in one or two days to encounter something they know as a fixed point? Or can it be that they have this keenness of sight, peculiar to all natives, but in their case extremely accentuated?

The men and women seem to eat together, but some travellers have been betrayed into thinking they are not permitted to do so, for the reason that the onerous duties of the wives in cooking sufficient food for the family will call them away during the meal. They sit about and wait upon the men, but with no other restriction than would be evinced by a woman among the working classes in any other country. A friend strolling into a boma during meal time, without being asked or manifesting any hesitation, will squat down by the trencher bowls containing the food and partake as if he was quite at home. They are particularly fond of fats, and will eat the hippopotamus, which has a reeking oleaginous flesh, with the greatest gusto.

On approaching Mireali's province, Mungu ascended the last hill to his boma; the track was very rocky and difficult for my porters; I soon heard the buzz and hum of distant voices, and on searching for a solution of the hubbub I found on the top of the hill two or three thousand people, among whose vestments a bright red colour seemed to prevail, moving and circling about, but all converging on one point; as I neared them I discovered that the centre of attraction was a man standing upon a rock, a native, tall and handsome, but dressed in a pair of German military trousers, a white knitted shirt with a brilliant pin on the bosom, a celluloid high collar, a cravat of the most flaming colour, a striped woollen 'Scotch shooting coat, a pair of Russian-leather shoes with brown-coloured gaiters, and a flamboyant pocket handkerchief. His fine head was disfigured by wearing a black silk hat, he carried an English walking stick, and held in his hand a pair of Dent's gloves. This was Mireali, the handsomest man in Africa, the most noble and majestic chief—if not the most powerful. This chivalrous chief had summoned all his people—several thousand—to bid me welcome, and thinking to do the white woman honour had bedecked himself in this cast-off finery of some of the American hunters, and of the various other persons of different nationalities who had but recently been in his province.

When all the salaams had been made, Mireali welcomed me with great ceremony. He took me to his old boma, which presented rather a ghastly appearance. It appeared that Mandara had burnt his house, and the charred remnants of his first advance in civilisation—built by Swahili labour, and in such a style as one might find in Zanzibar—were alone to be

seen. His present boma was separated from this site by a rubble dry stone fence, about ten feet high and three and a half in thickness, upon which two or three pet goats usually disported themselves, and frequently all his wives and the women of his wives would look up over this fence, to see "bébé bwana." As soon as I had an opportunity of exchanging a few words with Mireali—when he asked me for all the white men who had visited him, especially the Americans, such as Abbot, Chandler, Carroll, Stevens, and others—I said, "Mireali, why do you wear these clothes? They make you look like a goat. I want to see you in your own native costumes, and see you as Mireali, the great African sultan that you are." The next morning he presented himself with an enormous cloth, as large as four table cloths, wound around him in the most graceful and artistic manner, and trailing behind him, carrying a long spear, and backed up by his wives and followers, all in native costumes. The wives all wear pieces of "Americana," which is somewhat superior to the trade "gumpty," with quantities of beaded and metal ornaments. He looked truly majestic as he advanced with his picturesque cortège, and I could not help recalling some of the old pictures of Roman senators. His mien was full of composure, yet gracious in his desire to be hospitable, and there was a lurking anxiety withal, which manifested itself in his furtive glances, as if he sought to know what would most please me. In the course of the day he brought me sheep, with fat tails dragging on the ground, one or two of which he had been fattening especially for me (these could scarcely have been more burdened with superfluous flesh); also numerous goats, and one cow after another until the number reached ten. This was a thing unparalleled in African generosity, as one or two cows are considered a right royal offering; this man, however, in his eagerness to know more of me and make me feel he was my friend, and to engage my friendship, had nothing in his province that he would not have bestowed upon me had I expressed the desire to possess it. We had many talks and I found him intelligent, his brain alert and susceptible of impressions, and with a general discontent with his condition, and a craving to become more like the white men. My finest music box he coveted without any disposition to dissemble and was never happier than when watching the wheels go round and marking the intonations of the carols. Finally, in a spasm of desire—which overcame him—to possess this box, he came and planted before me his own personal spear and said, "Bébé bwana, take this and let me have your music box." I gave him the music box, happy to possess the spear. I queried, "How will you keep this box from being stolen, as

your other treasures have been stolen, by Mandara?" He led me to an excavation in a secluded spot, under the shade of banana trees in the middle of his plantation which was lined with stone slabs and completely covered inside with hyrax and monkey skins, and here he placed his treasure with a jewelled sword I had brought to him from England, and after covering it up with a lid and replacing the sod, he said, "Mandara can never find that."

I am authoritatively informed that this habit of burying treasures, especially ivory, is universally resorted to by all African tribes.

The women of his wives are totally naked, wearing decorative beaded ropes, twenty-four or thirty in number, around their waists, arms and legs, but with no other attempt at clothing. They are most beautifully formed, dark in colour, and their features are absolutely pretty. Their teeth are glittering white, and they seem to give a great deal of attention to the decoration of their bodies with their beads, which are usually white, and either pale or dark blue or solid colours, and dainty in the extreme. They also wear cloth and leather pendants which may be denominated as African fig-leaves. These articles are likewise worn by some of the men and many of the children, and are profusely ornamented. The grace of these women in moving about is the grace which belongs to all people who are in the habit of carrying loads over mountainous countries on their heads, and they have almost the movement of a gazelle in climbing and descending the mountains. This imparts to them a somewhat haughty mien as they approach you without loads. They are great posers when they are *en evidence*, when they have an audience from other tribes, or when the white man is present.

Mireali represents all that is superior and intelligent among these tribes. He has as a rival in intelligence, the youngest sultan in East Africa, Miriami, who has possessions in Kilema. This young prince, after I had bestowed upon him all kinds of presents still looked somewhat downcast, and when I asked, "Is there anything else you would like? Are my gifts not to your pleasure?" replied, "Ah, dio, bébé bwana; but I want an English saw and an English hammer." I asked, "What do you want these for?" He answered, "Ah, bébé bwana, I want to build an English house and live like a white man." I promised to send him the saw. He said, "Ah, yes, they all promise, but they all forget; the white man always lies." I said, "Stop, Miriami, you must not speak to a white woman in that way. I never lie. I will send you the saw." And upon my return, this thing haunted me together with other promises I

had made these poor people, and I never rested, day or night, until every one had met a fulfilment, and Miriami had his saw. So it is, I think, if people when visiting their country, instead of taking useless, valueless, showy trumpery, would give these people implements, useful and simple to understand, and take a little trouble to teach them their uses, they would be found willing, appreciative, and grateful.

Their suffering from cold in these districts—for the wind rises at four in the afternoon—is very pitiful, and although they have quantities of furs they are constantly asking for clothes and blankets to keep them warm. The various fibres and grasses which abound throughout the land are capable of being made into fabrics, exactly as they have been utilised by the people of Madagascar, Peru, and other countries. If only the simplest looms, without mechanical intricacies, were introduced into the district, they could very soon supply their own requirements. It does not require a great stretch of imagination to believe that people who are capable of making the delicate chains, of which I saw so many examples, and who can weld such beautiful spears, make shields, fashion gourds, and tan leather, with as great skill as they do, are capable of much better things if they were once properly directed.

The entire civilisation of this section of Africa must come by the introduction of those practical things, which will bring into their lives the comforts of enlightened races.

Mireali has made some very fair candles out of the beeswax; he craves for light, and no more welcome gift did I bestow on him than candles, oil, and soap. They could also, by the introduction of such simple sugar presses as are used to-day in Madagascar, express the juice from the sugar cane, which grows in great abundance, and provide for themselves this appetizing edible, preserving it for such times as there were no crops, and having the benefit of its nourishment when the harvests failed. Also they would regard every new employment in which they might become skilled as an amusement; they delight in the novelties which the white man brings, and Mireali showed me with great pride twelve folding wooden chairs, like deck chairs, and a table of his own manufacture before which he sat while eating, and he was perfectly delighted when I gave him a table cloth, napkins, knives and forks, a set of little china tea cups and saucers, and some tea. The most remarkable afternoon tea I had during my African season was in his boma, sitting on a four-legged stool, surrounded by his wives, and waited upon by himself, with a cup of tea of his own brewing, some sugar cane, bananas, an attempt at bread made from banana flour, and a tomato salad which he had himself concocted. I had

taken some boxes of sweets, but these people did not care for them. The boys took the sugar plums, used them as marbles, and shot them out of their fingers at targets.

Leaving Mireali, I went direct to Mandara's at Mochi. There was some commotion among the people, in consequence of the occupation of Mandara's old boma by the German garrison, and they were disturbed, and uncertain as to the future. They were not allowed to have guns, and their spears had been generally gathered up by the Germans. Thus they were very much depressed and discouraged, with the exception of Mandara himself, who never permits himself to betray any weakness.

The habits and customs of these people are all the same. Their superstitions are the same, and although they are not industrious, one cannot admit they are idle. If a man must go two miles over a mountain pass to get enough water to drink for one day, he cannot be considered lazy, if, when he comes home, he lolls about, overcome by the heat of a tropical sun or chilled by the wild periodical winds.

On leaving Mandara the tribes were more or less scattered, and going down the German route from Taveta, where I touched according to promise to see my friends, I found the German swamps—especially the papyrus swamps—difficult and uninteresting. The people had deserted the country, retiring back into the fastnesses of the mountains, in consequence of the raids made upon the Masai and the Masais raid upon the people through this section, and so they were afraid to put in an appearance. Occasionally a bevy of ten or fifteen would come to sell us food or make exchange of presents; but it deprived the German route of much interest, until we struck the various plantations, within fifty miles or so of the coast, which were occupied by German officers and scientific men of culture and experience, who were testing the agricultural fertility of Africa in raising tobacco, rice, and some coffee.

It was at Misinda, on the German side, that my porters dropped me in my palanquin, and I was injured. The tenderness and attention of my men throughout the remnant of my journey—five days—to Penganai, was most pathetic. I was without the attention of any woman, and had I been a child in arms these stalwart fellows could not have been more careful if each of them had been in attendance upon his own and dearly beloved child.

In conclusion—the detail of the journey has no place here, but the evidences that I have brought of the gentleness and intelligence of these natives certainly bears an indisputable proof in their own lineaments, and if a spirit is aroused among so-called humanitarians or those who have interests involved

in East Africa to such an extent that they study the practical employment of these people in arts and crafts, which they may conduct within the limits of their own territory, and some movement is put abroad to make proper roads and substitute for human beasts of burden mechanical methods of transportation, there is a brilliant future for East Africa. If the slaves who are now in Africa had some means of self-liberation, by which they could pay for themselves by their own work instead of becoming the paupers of a zealous philanthropy, and if they were treated as the children they are in all matters appertaining to Christianity and legal codes, the future of these people would be assured ; and I am prepared to say if the East Africans need a friend, and it is in my power to co-operate with any body of men or women to promote their interests on these lines, let me be known as that friend.

ANNUAL GENERAL MEETING.

JANUARY 26TH, 1892.

EDWARD B. TYLOR, Esq., D.C.L., F.R.S., *President, in the Chair.*

The Minutes of the last Meeting were read and signed.

The CHAIRMAN declared the ballot open, and appointed Mr. J. ALLEN BROWN and Lieut.-Colonel JOSEPH HARTLEY Scrutineers.

The Treasurer read the following Report:—

TREASURER'S REPORT FOR 1891.

The receipts from the sources which usually form the revenue of the Anthropological Institute have during the year 1891 amounted to £556 8s. 7*d.*, being £5 18s. 11*d.* less than in 1890; but, notwithstanding this apparent falling off, the nature of the income is of a more satisfactory character. We have only received one life composition in 1891, instead of two, as in 1890, and the subscriptions for the year 1891 received during the year were more than in any of the three previous years, and £35 14s. more than those for 1890. The sales of publications were also greater than they have been in any of the five preceding years, and £6 5s. 3*d.* more than in 1890. The sum of £8 has been received for books, &c., sold from the Library, to make room for more recent acquisitions which are of greater value to the Institute; and £60 have been received towards the printing of "Anthropological Notes and Queries," on account of which, up to the end of the year, only £17 11s. 6*d.* had been paid; the balance remaining in hand till required. I am informed that a further sum of £20 has been voted for this work by the British Association.

The ordinary expenditure for the year has been £609 0s. 9*d.*, being £52 12s. 2*d.* more than the receipts from revenue, but £47 16s. 7*d.* less than the corresponding expenditure for 1890; notwithstanding an increase of nearly £10 in postage, caused by special efforts to bring ourselves and our work more prominently before the public. The reduction of expenditure has, in fact, been chiefly on account of the *Journal*, and can therefore neither be expected nor desired to continue. A further sum of

£4 17s. 7d. has been spent on binding out of the £20 set aside for that purpose last year, leaving £6 5s. 6d. still in hand.

The liabilities at the end of 1891 (other than our moral liability to life members) were :—

	£	s.	d.
Rent for one quarter.	41	5	0
Two numbers of <i>Journal</i> , say	90	0	0
"Anthropological Notes and Queries"	42	8	6
Small sundries, say	11	6	6
	<hr/>		
Total	£185	0	0
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The assets at the same date were: £800 of stock (worth about £880), and cash in hand and at Bank £71 11s. 9d., besides some unpaid subscriptions, and the library, and stock of publications.

While, however, the Institute is perfectly solvent, and its income for the past year is of an encouraging character, it must not be forgotten that its expenditure is and must continue to be in excess of its present income, and that our efforts to increase that income must therefore on no account be relaxed.

A. L. LEWIS,

Treasurer.

The Secretary, Mr. CUTHBERT E. PEEK, read the following Report:—

REPORT OF THE COUNCIL OF THE ANTHROPOLOGICAL INSTITUTE
OF GREAT BRITAIN AND IRELAND FOR THE YEAR 1891.

During the past year twelve Ordinary Meetings have been held, in addition to the Annual General Meeting.

The following is a list of the various communications that have been submitted to the Institute during the year:—

1. Exhibition of Sketches of Horse Ornaments, Symbolic Survivals. By G. M. Atkinson.
2. Note on the People and Languages of New Ireland and Admiralty Islands. By Sidney H. Ray.
3. Note on the presence of a Mongoloid Element in Brittany. By Cte. A. Mahé de la Bourdonnais.
4. Religion and Family among the Haidas (Queen Charlotte Islands). By the Rev. Charles Harrison.
5. Note on the Haidas. By Miss A. W. Buckland.
6. Retrospect of Work done at my Anthropometric Laboratory at South Kensington. By Francis Galton, F.R.S.
7. The Anthropometric Laboratory of Ireland. By Professor D. J. Cunningham, M.D., and Professor A. C. Haddon, M.A.
8. The Skull and some of the other Bones of the Skeleton of Cornelius Magrath, the Irish Giant. By Professor D. J. Cunningham, M.D., F.R.S.
9. Exhibition of Objects from the Pacific Islands and the West Coast of America, collected during the Voyages of Vancouver. By Charles H. Read, F.S.A.
10. Notes on the Natives of Fakaofu (Bowditch Island). By J. J. Lister.
11. Upon the Types of the Early Inhabitants of Mesopotamia. By T. G. Pinches.
12. Babylonian Tablets, belonging to Sir Henry Peek, Bart. Exhibited by Cuthbert E. Peek, M.A.
13. Babylonian Tablets. Exhibited by F. W. Rudler, F.G.S.
14. On a Message Stick from Jardine River, and Notes on Queensland Natives. By Professor A. C. Haddon, M.A.
15. The Natives of Borneo. Edited from the Papers of the late Hugh Brooke Low, Esq. By H. Ling Roth.
16. On the Origin and Sacred Character of certain Ornaments of the South East Pacific. By Charles H. Read, F.S.A.
17. Curious Words and Customs connected with Royalty and Chieftainship among the Hova and other Malagasy Tribes. By the Rev. James Sibree.
18. Decorative Carving on Wood, especially on the Burial Memorials of the Betsileo Malagasy; with illustrative rubbings. By the Rev. James Sibree.
19. On the Primitive Characters of the Flint Implements of the Chalk Plateau of Kent, with reference to the question of their Glacial or Pre-Glacial Age. By Joseph Prestwich, D.C.L., F.R.S., &c.
20. On Certain Rude Implements from the North Downs. By B. Harrison.
21. Notes on Flint Implements from the Chalk Plateau. By De Barri Crawshaw.
22. Photograph of a Sculptured Human Figure found in Sarawak. Exhibited by Lady Brooke (H.H. the Ranee of Sarawak).
23. Imprints of the Hand, by Dr. Forgeot, of the Laboratoire d'Anthropologie Criminale, Lyon. Exhibited by Francis Galton, F.R.S.
24. The Limits of Savage Religion. By Edward B. Tylor, D.C.L., F.R.S.

25. Perforated Stones of South Africa. By H. Mitford Barber.
 26. Notes on the Indians of the Similkameen, British Columbia. By Mrs. S. S. Allison.
 27. The Toltec Relics of Teotihuacan, Mexico. By Osbert H. Howarth.
 28. Burial Customs of New Britain. By the Rev. B. Danks.

In the course of the year four numbers of the *Journal* have been issued: namely, Nos. 74, 75, 76, and 77. These contain 377 pages of letterpress, and are illustrated by 16 plates and woodcuts.

Twenty-eight new members have been elected during the year, viz., one honorary, two corresponding, and twenty-five honorary members; eleven members have retired or been struck off by the Council, and fifteen members have been removed by death.

In the following table the present state of the Institute, with respect to the number of members, is compared with its condition at the corresponding period of last year:—

	Honorary.	Corresponding.	Compounders.	Ordinary.	Total.
January 1st, 1891	43	76	94	217	430
Since elected ..	1	2	1	24	28
Since deceased ..	5	..	6	4	15
Since retired or been struck off	..	3	..	8	11
January 1st, 1892	39	75	89	229	432

The following are the names of the ordinary members whose deaths have been reported during the year:—

His Grace the Duke of Devonshire.
 Dr. G. W. Daniell.
 Walter Kidman Foster.
 Mrs. C. A. Fraser.
 Sir R. N. Fowler, Bart.
 Colonel E. Cecil Johnson.
 Professor H. N. Moseley.
 The Right Hon. the Earl of Northesk.
 M. J. Odgers.
 James Rae.

Dr. Tylor has consented to allow himself to be nominated for a second term of office as President, and the Council desire to

bear testimony to the unflagging interest he has taken in the affairs of the Institute during the past year. Probably the most important event during the past year has been the preparation of a new edition of "Notes and Queries," under the editorship of Dr. Garson and Mr. Read. The work has been in great part re-written, and will be on sale in a few days. A sum of money having been voted for the binding of periodicals, &c., this very necessary work is being proceeded with. In concluding the report the Secretary desires to express his thanks to Mr. Rudler for the advice and assistance he has on all occasions most freely given him on all points of doubt or difficulty in connection with the affairs of the Institute.

The Reports were adopted on the motion of Mr. MAURICE BEAUFORT, seconded by the Hon. J. ABERCROMBY.

The PRESIDENT delivered the following Address:—

ANNIVERSARY ADDRESS.

By EDWARD B. TYLOR, D.C.L., F.R.S., *President.*

IN summing up the account of last year's work, which it is my duty as President to lay before the Institute, it is pleasant to record that the year has been moderately prosperous to us as a Society, and that the papers read have furnished the *Journal* with solid anthropological material, including not a little new work.

In the department of physical anthropology we have had from our Vice-President, Mr. Francis Galton, notice of the re-establishment of his Anthropometric Laboratory within the precincts of the South Kensington Museum. The importance of correlated measurements of man is now being brought into public view by applications of practical use, as in criminal anthropology by M. Alphonse Bertillon. We may follow with much interest Mr. Galton's observations on "finger-marks," the patterns of which seem not to vary indiscriminately, but to fall into a few well-marked classes, suggesting that natural selection

was not alone operative in their determination, but that some more direct relation of cause to effect may be inferred. If I may express an opinion, I will say that at present, when natural selection is apt to be treated as a universal solvent in biological phenomena, cases in which forms appear not to have been sifted out, but directly produced, may often point to other real causation. In this connexion may be mentioned the imprints of the hand by Dr. Forgeot of the Paris Laboratory of Criminal Anthropology, which show that the marks left by a human hand on such a surface as a greasy window-pane suffice to identify for life the individual who even accidentally impressed them. Professor Cunningham and Professor Haddon record the formation of their Anthropometric Laboratory in Dublin, promising valuable results. The skeleton of Cornelius Magrath, the Irish giant, furnished the text for discussion of the development of abnormal stature. In this physical branch of the subject mention is to be made of Mr. Pinches' paper on the types of the early inhabitants of Mesopotamia, a contribution to the problem of distinguishing the old Akkadian stock from the so-called Semitic types of Babylonia-Assyria. It were to be wished that we knew better the nature of the Akkadian hair, which might combine with evidence of language to confirm or upset the theory of their Tartar affinity.

On the side of geology and prehistoric archaeology the Institute has had communications of the first importance, embodying the researches of Professor Prestwich, Messrs. B. Harrison and De Barri Crawshay, on the Flint Implements of the Chalk Plateau of Kent. Since 1869 implements of rude palæolithic kind have been found in various places high on the chalk by Dr. John Evans and others, and their anthropological importance has been made evident by the careful study of Mr. Harrison. The number found and examined by him, Mr. Crawshay, Mr. Spurrell, and Mr. A. M. Bell is very large. The general rudeness of type of the implements from the higher plateau, placing them distinctly as a class below the ordinary palæolithic forms, seems admitted by most who have studied the question to prove an

early stage of the palæolithic period, in comparison with which the skilfully trimmed picks of the Somme and Ouse high level gravels show a marked advance in the implement-making art. Those who examine the chalk plateau implements often feel strong doubts as to many so alleged being made by man; indeed the line between natural and artificial is impossible to draw; but fortunately the hundreds of specimens collected show similarity in groups, so as to distinguish between natural fragments which have been chipped further by a particular kind of use, and flints systematically brought to implement shapes. Yet there are implements which show better work, especially the class in which a semicircle is chipped away large enough to take the ball of one's thumb. So obviously are these curve-scrapers intended for smoothing sticks or spears that they are now called by the local name of "drawshaves," and they are analogous to a well-known neolithic form. These are not by any means tools of the lowest order, but the general average of the plateau implements justifies the opinion that in the history of man the highest antiquity and the lowest culture go together. The problem of the actual period to which the plateau implements belong is still under debate among geologists. It is claimed that they come within the glacial period, or even before, but this is disputed. We may expect to hear much more of this by next year.

Within this department two papers may be noticed as dealing with antiquities little before the historical period. These are Mr. Osbert H. Howarth's memoir on the pyramids of Teotihuacan in Mexico, which, I trust, will lead to this competent architectural observer being enabled to make excavations throwing more light on these monuments, possibly involving the main secret of Aztec history: and Mr. H. Mitford Barber's remarks on the perforated stones of South Africa, where the Stone Age far outlasted the time when the use of metal pervaded the rest of the continent.

In research into the arts, customs, religion, and other elements of culture among races of lower or middle civilisation, the

year's work has been highly satisfactory. The Rev. Charles Harrison, a missionary long familiar with the life and language of the Haidas of Queen Charlotte Islands, read a paper on religion and family among them, containing much information. The creation myth of the great Raven is related at length, and the doctrine of man-devouring gods. It will, however, need care to separate the native ideas of Haida religion from those which have been borrowed from Christianity. Mr. Harrison has compiled a Grammar and Dictionary of Haida, a very little known tongue, which it is desirable should be printed. Miss Buckland contributed notes relating to Haida culture. The exhibition by Mr. Read of a remarkable collection of specimens from Vancouver's voyage, 1790-5, with his remarks thereon, throw light on many points of culture of tribes of the West Coast of North America. Mr. Read argues for the derivation of the Hawaiian helmets, not from old visits of Spaniards, but from native hair-dressing. The spear-throwers from Santa Barbara (California) and about Sitka are interesting, as also the spliced bow from California. These important objects have been acquired by Mr. Franks, who presents them to the Christy Collection of the British Museum. To Mr. Read we owe also a communication which will strengthen the hands of students who, with General Pitt-Rivers, look for the source of ornamental design, not in spontaneous art-fancy, but in representations of objects or ideas for serious purpose. The series of illustrations beginning with two gods back to back, placed on the canoe as patrons to be worshipped, and which by successive degradations come down to the shape of a plain fan-handle, is ideally perfect. Equally instructive, though sometimes more difficult to follow, are the changes in form of idols of the unrivalled early Polynesian set belonging to the London Missionary Society, and now deposited in the British Museum, where they can be conveniently studied. Mr. Read, with Mr. Edge-Partington, have successfully explained, by drawings, the extraordinary lines of artistic modification which cannot be made clear by mere description.

Mr. J. J. Lister's notes on the natives of Fakaofu shows how much may still be learnt by good observers in Polynesia. The connexion between the great girth of chest and length of arm and the canoe-life of the natives, bears upon a now much debated problem of anthropology, the origin of variations. Students of the origin of ornament will see with interest the human figures, much conventionalized, which adorn the breast of the King of Fakaofu together with markings, which are now, at least, only ornamental.

The first of the series of papers on the Dayaks, edited by Mr. Ling Roth from the MS. notes of the late Mr. Brooke Low, placed at the disposal of the Institute by his father, Sir Hugh Low, appears in the present volume of the Journal. Mr. Low's work is of great excellence, and illustrates remarkably the uniformity of the strata of civilisation over the world. Thus his account of Dayak religion furnishes passages which so go to the roots of the religious ideas of the lower races, as in the matter of shadow-souls and of omen-birds, that they may be used for the interpretation of similar beliefs in America or Africa. Mr. Roth is still engaged in the difficult task, requiring much independent study, of arranging Mr. Low's notes for the Institute, and we may hope to have one or two further instalments shortly.

From the Rev. Jas. Sibree, junr., the Institute has had two interesting papers on Malagasy royal words and customs and decorative carving. It is evident from these papers that the time has now come for a systematic comparison of the culture of the Malagasy with that of the Malays and Polynesians. Among points here dealt with which lie open to such treatment are the ceremonial avoidance of chiefs' names and the provision of new names for the deceased. Malagasy ornamental carving becomes known almost for the first time through Mr. Sibree's descriptions and illustrations, and it seems as though its patterns may eventually be explained partly by historical connection with those of the Pacific Islands, and partly by that derivation from the representative figures of men,

animals, and other objects which is now being traced in so many districts.

The Rev. B. Danks' account of the Burial Customs of New Britain in several respects throws light on savage ideas of a future existence. Mrs. Allison's account of the Indians of the Similk'ameen, British Columbia, has more weight and significance than at first appears from its colloquial style. In fact the writer's knowledge of native character is extremely intimate, and she knows, what more systematic observers often fail to appreciate, how barbaric society and religion look from the barbarians' own point of view. On my own paper on the limits of savage religion I need only say that it is high time that such papers should be written, for the accounts of religious ideas among the lower races, as representing stages of religious development among mankind, are being so spoilt by native religious ideas becoming mixed with those borrowed from civilised men, and especially from missionaries, that only the most laborious and stringent criticism can bring them down to their original state.

Mr. Sidney H. Ray's contribution on 'the People and Languages of New Ireland and the Admiralty Islands touches points of culture, but is mainly philological, adding to and correcting present vocabularies. Among linguistic material which has come before us were valuable collections of Babylonian tablets exhibited by Sir Henry Peek and Mr. Rudler, and commented on by Mr. Pinches.

I have now to say something of anthropological matters during the year, in which we are more or less directly interested :

For years past men at once experienced in the administration of India and entitled to speak with authority on various branches of anthropology, such as Sir Alfred Lyall, Mr. Risley, Mr. Ibbetson, and Mr. Crooke, have made it clear that anthropologists in general, while devoting themselves to the study of more outlying and less accessible races of the world, have somewhat neglected the vast field for their research in

the British Dominions of the East. Those who make these representations cannot be reproached as laying on others a burden they are not willing to bear their own share of, for their published writings hold important places in our science. Mr. Risley's addresses in England led to the formation in 1889 of the British Association Committee on the Habits, Customs, Physical Characteristics, and Religions of the Natives of India. During previous years he had been engaged in carrying out under the Government of Bengal what may be called an Anthropological census on the largest scale. Its first results appear in his two volumes, published in 1891, on the Tribes and Castes of Bengal, which are described as follows by Dr. Garson:—

“This work, in two large volumes, contains the records of measurements made under the author's supervision in Bengal, the North-West Provinces, and the Punjab during 1886–88, on a very large number of natives of those districts. The observations were made upon the following characters, viz., the Nasal index, Naso-malar index, Cephalic index, Vertico-bimalar index, Vertico-frontal index, Vertico-bizygomatic index, Height-weight index, and Facial angle. The book begins with a series of abstract tables of the averages of each measurement and index in the various tribes and castes as well as for the whole district. The remainder of the work consists of tables of measurements and tables of indices calculated from these measurements of the different individuals on whom observations were made. The author has, as far as possible, endeavoured to obtain the measurements of 100 persons of each caste and tribe, though he has not always succeeded in getting so many; he has examined a very large number representing no less than eighty-nine different castes and tribes. In the present volumes the author has not attempted to analyse his work, but in the preface he says, ‘A full analysis of the measurements, indicating their bearing upon the ethnology of northern India and also upon certain more general questions which have been discussed by ethnologists in Europe, will be given in a separate volume.’

The work contains most valuable data for anyone who desires to work out the physical characters of the inhabitants of India. Not only have we got averages, but what is much more important, an enormous number of actual observations, so that it is possible to study individual variations and many other things." The notice of this work in the *Times* of August 24th, 1891,¹ carrying on the account of the researches involved, beyond the anthropometric data, into racial and social characters, is of such fulness and excellence that I am glad to refer my hearers to it instead of now travelling over the same ground.

The Anthropological Section of the British Association held at Cardiff, was presided over by Professor Max Müller, whose introductory Address, treating of the relations of race, language, and civilisation, is reprinted in our Journal.

Comparative philology has not been strongly represented in the Institute this year, but there is reason to hope that we may extend further in this direction. In this connexion I may mention to those interested in the study of North African languages, that, in 1890, I had the opportunity of some conversation with Professor F. W. Newman, the patriarch of this study. Though in intellectual vigour, he told me that he must devote the rest of his life to other work which left no room for philological research, and eventually he transmitted to me his books and notes for use in carrying on the interesting problems in which he broke ground above fifty years ago. There has been other work done in this field, but his view that the so-called Berber languages constitute a group allied to Arabic and Hebrew (he named them sub-Semitic) remains, I think, in possession. When we remember that to Libya belongs the first historical appearance of a white race of mankind, the Tamhu of the Egyptian monuments, we must admit the importance of linguistic study of this region. The related

¹ Reprinted by permission in "Journal of Anthropological Institute," vol. xxi, p. 335.

² London: Masters & Co., 1891.

problem of the race or races of the Canary Islands has not of late been left untouched. The Marquess of Bute read at the British Association a learned and suggestive paper "On the Ancient Language of the Natives of Tenerife,"² which though not brought before this Institute, has been placed by its writer in the hands of our members. In it the author subjected to elaborate philological criticism the late valuable work on the island by Dr. Chil y Naranjo. An important feature of the treatment both by him and by Lord Bute is to separate so far as possible the scanty vocabularies of the different islands, Tenerife being here treated apart. The opinion connecting the Canary group of languages with the Berber family of North Africa has not, so far as I know, been invalidated. But the fact that we have in the Canaries tribes using obsidian implements, and thus distinctly in the Stone Age, while by language showing connexion, however remotely, with Semitic nations, opens an enquiry which needs no further description to show the necessity of its being pursued by anthropologists.

It is satisfactory in this connexion to call attention to the prosperity of the other Anthropological Society in the British Empire, that of Bombay, the second volume of whose Journal is far advanced.

Mr. Denzil Ibbetson in his Presidential Address dwells on the fact that the great book-religions, Brahmanism and Buddhism, do not define the religions of the people of India. The powers that the peasant really knows and fears are the little gods who watch over the homestead, who bring or avert pestilence, who fill the udders of the kine and bring forth the fruits of the earth, the saints who grant and withhold a son, who strike the first-born with fever, or watch over the goodman on a distant journey, the fairies who molest women, and the ghosts who possess men. It is for them that he lights his lamp on Thursday evening, and sets it afloat on the village pond; it is at their shrine that he erects five nodding plumes of grass and ties a bit of red rag on the tree, in their name that he feeds a donkey, or lets loose a white cock by the river bank; it is from

fear of them that he brings to the wise man his tobacco, waved over the body of the patient, and watches in superstitious awe, while the Jogi wags his head and dances to the sound of the drum till he falls to the ground in a frenzy of inspiration, and points out the name of the power who must be propitiated. What do we know of these? The next President, Dr. Dymock, discusses the religious tendencies of educated Hindus, attracted between Christianity, a modified Shivaism, and scientific Agnosticism. He raises, in an interesting paper on Indian narcotics, the question of the earliest date of hemp-smoking in India. I take the opportunity of carrying the question further, by asking whether any Orientalist can point out the earliest appearance anywhere, probably in Persia, of the smoking of hemp in the kalia or narghileh, the settlement of which point may throw light on various dates in the history of culture. Among Mr. F. Fawcett's papers is a note on that curious religious instrument, the mouth lock, a kind of large silver safety-pin stuck through both cheeks between the teeth to keep the mouth open. It is connected especially with vows of abstinence and silence, and seems to centre in pilgrimage to Tirupati in north-west Madras. So unusual and special a proceeding deserves to have its origin worked out. To the same writer we owe an instructive account of Festivals to Village Goddesses. The Goddess of the North in Tinnevely, represented by a heap of mud anywhere, is worshipped by the lowest classes, formed of the original inhabitants, and seems suggestive of the deity of the conquering race who drove them to the south. The sacrifice to Mâriamma (Cholera-mother) is performed by a man named Pôturâz as his hereditary duty; he brings a black ram, for which he is paid, and standing before the symbols of the goddess he holds the ram in his arms, bites at its throat till it dies, when, tearing its bleeding flesh with his teeth, he presents it in his mouth as an offering.

Mr. E. Rehatsek's account of the superstitions of the Goa Christians shows that we may look in India for relics of European culture of the sixteenth century. The spirits who

throw stones in harmless mischief are there still, and the anthropologist may still see men possessed by devils who speak unknown tongues through them, till exorcised by the Padre.

The Committee of the British Association appointed at Montreal in 1884, for the investigation of the north-western tribes of the Dominion of Canada, and supported by the annual grants of the British Association and the subsidy of the Canadian Government, has continued to do good work, its most valuable reports being those of 1890 and 1891. The complex relations of languages and tribes in this region are being cleared up. Thus Mr. Horatio Hale, the veteran ethnographer, whose services have been especially important to the Committee, confirms the result of the analysis by Dr. Franz Boas of the Nutka language, previously supposed to be isolated, but which now appears allied to the wide-spread Kwakiutl.

Among the group of tribes investigated by Dr. Boas two institutions, seemingly due to Kwakiutl influence, have had remarkable social effects. The secret societies are of extraordinary political influence, reminding us of those of West Africa or of Melanesia, and the more societies a man belongs to the higher is his standing in the community. The potlatch or gift-festivals, when property is distributed with apparent reckless profusion, are not as they have been described by those who did not understand them, mere ostentatious waste, but represent in fact property lent at usury, each recipient being at a future day bound to restore twofold what he had received. The liberal donor, as he saw his friends depart in their well-laden canoes, had the satisfaction of feeling not only his dignity increased but his means invested at good interest. The well-meant act of the local legislation abolishing potlatch indeed seriously discomposed the arrangements of native society.

Among the anthropological books of the year mention is to be made of Dr. Codrington's "Melanesians," a work which in future times, when the world has passed into new phases of

science and philosophy, will always remain as a record, minute and faithful, of what in the savage and barbaric stages of human life men thought of the laws and customs they lived by, and the religious beliefs and rites which explained to them, and kept them in intercourse with, powers without themselves. To observers of this class savage ideas, which the civilised man is apt to consider so dull and limited, yield the very secrets of the origin of culture.

Sir Alfred Lyall, in his Rede lecture at Cambridge on "Natural Religion in India,"¹ displays the complex native faiths which we group together under the name of Hinduism, as unrolling before the student the whole panorama of religious ideas, seen at every stage of development side by side in one land, from the worship of fetish-stones and of the deified ghosts of British officers, to Pantheism, "the godless deep into which the ever-breaking shore of primitive beliefs is constantly tumbling, the last stage of Nature Worship." This discourse, with all its author's lucid style and epigram, may do much to bring the minds of Englishmen in India to bear on the study of man's intellectual and moral history, for which such materials lie within their reach.

Our obituary of honorary members must include the late Emperor of Brazil. It is for journals concerned with politics, history, and philanthropy to dwell on the high character and estimable intentions which marked a royal career ending dismally though not dishonourably. No sovereign of modern times has been comparable to him in attachment to and knowledge of science. But science has, perhaps happily, no power to replace kings on thrones or even to keep them there.

In Prince Louis-Lucien Bonaparte the Institute loses another honorary member. His connection with anthropology was on the philological side. During more than forty years he was engaged in collecting and discussing linguistic

¹ Cambridge University Press, 1891.

matter, especially with reference to the Basque and Finnish, but there was scarcely a European language which he did not by his publications enrich the study of.

A great loss sustained by anthropology during the past year has been the death of Professor G. A. Wilken, of the University of Leyden. His father was a Dutch missionary stationed in Celebes, and his mother partly of Malay descent. Sent to Holland for education, he distinguished himself from the first by that untiring zeal which made his short life exceptionally productive. From 1869 till 1880 he went back to the East Indies, employed in outlying districts, where he made his official duties a help to intimate knowledge of the people, which in its turn no doubt told favourably on his administrative work. His friend and pupil, Dr. Pleyte, relates how in Boeroe at sunset, after the day's work, the notables of the island would gather round him and go down to the cool sea-shore, where he would sit on a rock in the midst of an improvised assembly, and the old men would tell traditions of past glories in the days when every year a maiden chosen for her beauty was led down to the sea as a sacrifice to the crocodile-god for the prosperity of the people. After an official career which he ended as Controleur of the Batak district of Sumatra, Wilken returned to Leyden, succeeding the aged Professor Veth as Professor of Geography and Anthropology of Netherlands' India. The only time I saw him was there, and I well remember his surprised interest at finding his writings known and appreciated in England. They are indeed distinguished by scientific scholarship worthy of the old reputation of the Dutch. Nowhere has native life been more accurately described than in Malay districts by the Dutch officials and missionaries; and Wilken, guided by his own wide and careful observation, has been able to generalize the whole massive record as bearing on principles of law, custom, and religion, in a series of articles of which his "Animism among the Peoples of the Indian Archipelago" is the fullest. These are of the utmost value to anthropology, and it is to be hoped that the scheme of Wilken's colleagues

and pupils, of publishing a collected edition of his principal writings¹ with his MS. notes, may be carried out. Professor Wilken did not live to return to the East Indies on the scientific mission with which he was to have been charged. His health undermined by extreme labour, he died at the age of forty-four. It is some satisfaction to record that the message of English appreciation, involved in an honorary membership of this Institute, reached him in time to give a moment's pleasure.

The late Duke of Devonshire was for many years a member of the Anthropological Institute. He was a man of the highest intellectual culture, and even in branches of science which he had no leisure to contribute personally to he thought it well to give support and approval.

An eminent English anthropologist and honoured member of this Institute—Professor Moseley—died on 10th November, of this year. Henry Nottidge Moseley was born in 1844; he came of a scientific stock, being son of the Rev. Canon Moseley, F.R.S., the eminent mathematical physicist. Educated at Harrow and Exeter College, Oxford, his first class in the Natural Science Schools led on to the Radcliffe Travelling Fellowship, and to studies at Vienna and Leipzig, preparing him for a scientific career. From special medical studies he turned to biology, in which, as naturalist to the "Challenger" exploring expedition, he took his place among men of science. His biological work is well known and it is not for me to give details of it. We here regard him as an anthropologist, and as such his first work is contained in observations made on the "Challenger," and recorded in his "Notes by a Naturalist on the 'Challenger,'" 1879. It is unfortunate that the publication of this was not so arranged as to give the circulation it deserved, for it is an attractive book of sharp-sighted observation, most apt to stimulate the spirit of anthropological research. With the naturalist's eyes, trained already to the study of culture,

¹ See the detailed list in "Journal of the Anthropological Institute," vol. xxi, p. 192.

Moseley saw meaning and history everywhere in savage and barbaric life. When he handled the "lali" or wooden drum of Fiji, it was evident to him that church-bells are derived from such by a few stages of development. As he unfolded the long strip-like books of China and Japan, he pointed out that they occupy the intermediate place between the ancient scroll and the modern volume; roll them up, and they are the one; stitch their pages and cut them, and they become the other. Some of the material of this book has since been incorporated in one of the officially published volumes of the results of the "Challenger" Expedition, but the cost of this puts it out of the reach of most readers, and it is satisfactory to hear of its probable republication in a popular form. In 1881, Moseley was elected Linacre Professor of Human and Comparative Anatomy at Oxford. Mostly occupied with biological research, and the training of a group of now rising biologists, he was kept in contact with anthropology by his duties in connexion with the installation of the Pitt-Rivers Collection at the University Museum. In 1884, we went together to the British Association at Montreal, where he presided over the Biological Section, and thence to the American Association at Philadelphia. Then we made together a journey into Arizona and New Mexico, under the patronage of the Bureau of Ethnology, and in company of Mr. G. K. Gilbert of the American Geological Survey, with the special object of visiting the Pueblo Indians, and studying in their adobe villages a still-existing matriarchal society, and the continuance of a native religion which has held on through centuries of Spanish dominion. A visit to Morocco in 1886, of which no record has been published, ended Professor Moseley's ethnographical travel. This is not the place for me to speak of my personal friendship with him, still less to enlarge on his private life or the loss to the scientific world caused by his early death; I have limited my words to his career as bearing on our special science.

In conclusion, we have to look to future prospects of the Institute. The outcome of this year's report is simple and

obvious. We need more members and more individual work. How much can be done in this way is seen by the appreciable benefit to the Institute due to our new Secretary, Mr. Cuthbert Peek, having devoted so large a share of his time to the skilful and successful management of our affairs. The experience of the Institute shows that doing good work in Anthropology is what brings the public support which may be counted on as solid and lasting. Anthropology is now a far greater factor in public opinion than when this Institute was founded, and we have contributed our fair share to this growth. With a hundred more members we should be fairly abreast of our work, and these hundred more members are to be induced to come in by knowing that in our meetings and journals they will find provided for them the knowledge which they want.

It was moved by Mr. E. W. BRABROOK, seconded by Mr. CHARLES H. READ, and unanimously resolved—

“That the thanks of the Meeting be given to the President for his Address, and that it be printed in the *Journal* of the Institute.”

The SCRUTINEERS gave in their Report, and the following gentlemen were declared to be duly elected to serve as Officers and Council for the year 1892:—

President.—E. B. Tylor, Esq., D.C.L., F.R.S.

Vice-Presidents.—E. W. Brabrook, Esq., F.S.A.; Charles H. Read, Esq., F.S.A.; F. W. Rudler, Esq., F.G.S.

Secretary.—Cuthbert E. Peek, Esq., M.A., F.S.A.

Treasurer.—A. L. Lewis, Esq., F.C.A.

Council.—G. M. Atkinson, Esq.; H. Balfour, Esq., M.A.; R. Brown, Esq., Ph.D., M.A.; Hyde Clarke, Esq.; Rev. R. H. Codrington, D.D.; J. F. Collingwood, Esq., F.G.S.; W. L. Distant, Esq.; J. Edge-Partington, Esq.; J. G. Garson, Esq., M.D.; H. Gosselin, Esq.; Prof. A. C. Haddon, M.A.; T. V. Holmes, Esq., F.G.S.; R. Biddulph Martin, Esq., M.A.; R. Munro, Esq., M.A., M.D.; F. G. H. Price, Esq., F.S.A.; Oldfield Thomas, Esq., F.Z.S.; Coutts Trotter, Esq., F.G.S.; Sir W. Turner, LL.D., F.R.S.; M. J. Walhouse, Esq., F.R.A.S.; Gen. Sir C. P. Beauchamp Walker, K.C.B.

A vote of thanks to the retiring Vice-President, the retiring Councillors, the Secretary, the Treasurer, the Auditors, and the Scrutineers, was moved by Dr. GARSON, seconded by Mr. H BALFOUR, and carried by acclamation.

The Rev. D. JOHN McLEAN exhibited a collection of objects illustrative of the manners and customs of the Blackfoot and Sioux Indians, and gave an account of the Blackfoot Confederacy.

ANTHROPOLOGICAL MISCELLANEA AND NEW BOOKS.

Language as a Test of Mental Capacity.¹

By HORATIO HALE, M.A., F.R.S.C.

As man is beyond question the highest being in animated nature it might reasonably be supposed that anthropology, "the science of man," would rank highest among the natural sciences. Not only, however, has that prerogative not been conceded to this science, but the curious fact must be recorded that only within the last decade has even an equality with the other sciences been at last, very slowly and grudgingly, allowed to it.² This recent acknowledgment has been mainly due to two scientific developments, as they may be styled, both of the first importance. The earliest of these was the establishment of the fact, ascertained through the researches of Boucher de Perthes and his followers, of the great and hitherto unsuspected antiquity of man upon the earth. The other was the acceptance by the large majority of naturalists of the doctrine of evolution, as applicable to the human species, along with all other parts of the creation.

The reason why scientific men in general have hesitated so long, and still hesitate, to accord to anthropology its true position among the sciences, is one which must be said to do them no discredit. They have had what must be deemed a natural and reasonable feeling that this branch of science, as commonly studied, has no title to the special rank claimed for it. If man is merely an ordinary animal, and is not separated from other animals by a line as distinct as that which separates a tree from a stone, or

¹ A paper read at the Annual Meeting of the Royal Society of Canada, held in Montreal, on May 26th, 1891.

² It was not until the year 1882 that in the American Association for the Advancement of Science, at its thirty-first annual meeting, anthropology was raised from the humble position of a "subsection," or mere department of another science, to the rank of a full "section." Two years later, a similar advance in dignity was accorded to the science in the British Association, at its fifty-third meeting. By a rather singular coincidence both meetings took place in Montreal, and the writer had the fortune of being present on both occasions and taking some part in these tardy honours paid to a science to which he had made his first published contribution, in a very humble fashion, while an undergraduate, nearly fifty years before.

a stone from a star, why should he claim a whole main department of science to himself, and not be content with his modest "sub-section" along with the birds, the insects, the vegetables, and the other members of the great biological section? It must be admitted that the chief authorities in this science during the last thirty years, whether evolutionists or opponents of evolution, have offered no satisfactory reply to this objection. The reason of their failure is evident enough. With very few exceptions these eminent men have deliberately put aside the teachings of comparative philology on this subject, and have had recourse solely to evidences drawn from physiology. Yet it is certain that the grand characteristic which distinguishes man from all other mundane beings is articulate speech. It is language alone which entitles anthropology to its claim to be deemed a distinct department of science. Until this truth is clearly understood, scientific men in general will have a right to look askance upon the pretensions of a so-called science which has no established laws, lays down no definite principles, and puts forth no conclusions which claim any higher assurance than that of plausible conjectures. If geology or biology were in the same position, who would venture to claim for them the distinction of true sciences?

The two main grounds on which are rested the claims of language to be deemed the true basis of anthropology are: first, its position as the only certain test of the affinities of races; and, secondly, its not less important position as the only sure test of the mental capacity of any race. The first of these grounds has been discussed in a former essay. In a paper read in 1887, at the meeting of the American Association for the Advancement of Science, under the title of "The True Basis of Ethnology" and published in the "Popular Science Monthly" for January, 1888, under the title of "Race and Language," I endeavoured to bring together the evidence and authorities in support of the proposition that in language, and language alone, is to be found the true criterion of the genetic relationship of any two populations. It will be enough, perhaps, for the present to say that these arguments have been tersely and happily summed up by the most eminent of living philologists, Prof. Max Müller, who, in the third lecture of his recent publication, "Three Lectures on the Science of Language and its place in General Education," fully accepts this proposition and confirms it by many illustrations and arguments.¹ I may add the practical example of my distinguished friend, Dr. D. G. Brinton, who in his admirable work, "The American Race," has deliberately put aside all other tests, and has based his classification of the tribes of this continent solely on the distinction of linguistic stocks. But in referring to this subject on the present occasion, my only object is to disclaim for myself any title to originality in the conclusions which have been thus powerfully

¹ "I agree with Mr. Horatio Hale that the most satisfactory, nay the only possible division of the human race is that which is based on language."—"Three Lectures," &c., p. 49.

sustained. These conclusions were derived from the writings of two American philologists of earlier days, Peter S. Duponceau and Albert Gallatin (both, indeed, of European birth—the one French and the other Swiss), who in their works laid the foundation of American ethnology; and their conclusions have been sustained by a very eminent authority, Theodore Waitz, once deemed, before the present physical school acquired its undue predominance, the chief of German anthropologists. The first volume of his great work, “*Anthropology of Primitive Races*,” was translated and published in London in 1863 for the Anthropological Society of that city, as the best existing introduction to the science for whose study the society was established. In this volume he lays down the proposition, and illustrates it with abundance of facts and arguments, that “the scientific method at present applied in comparative philology possesses a higher degree of authenticity, and offers better guarantees for its results, than the methods of physical anthropology and craniology.” He shows also the futility of the common objection that men may change their language, but not their physical appearance. As he points out, and as history confirms, no people ever yet changed its language, until it had become so intimately mingled with another people as to receive from them, along with their language, a large infusion of their blood. The common—one might almost say, the vulgar—instance on the other side is that of the negro, or rather the “negroid” populations of the Southern United States and the West Indies. All these populations speak some language of Aryan origin, and on the principles of linguistic ethnology should be regarded as Aryans—which, say the objectors, they certainly are not. But this assertion simply betrays in those who make it, an ignorance both of historical facts and of scientific principles. The name of Aryan originated in ancient Bactria and northern Hindostan. Some three or four thousand years ago a light-hued people, composed of wandering herdsmen, descended from the north-west, in Tartar-like hordes, upon the plains of northern India, then occupied by swarthy tribes, whose descendants are now known as “Dravidians” and “Kolarians.” These communities of Indian negroes, as far south as the Godavery River, were subdued, and in great part absorbed, by the invading bands. Other conquering hordes of the same light-hued race descended upon southern Europe, overpowered and assimilated its brown-skinned populations (probably of North African origin), received their southern colour, and gave them their own northern language. If we give the name of Aryan to the dusky people of northern Hindostan and the brunette nations of southern Europe, why should we refuse it to the swarthy people of America, who speak languages of the same stock and have probably an equal infusion of Aryan blood? It should be borne in mind that among the negroid communities in the United States and the West Indies very few individuals of pure African blood remain. There is probably not one in a hundred, certainly not one in ten, who has

not some infusion of Aryan blood. In our scientific classification the Aryo-Dravidian nations of Hindostan and the Aryo-Iberian nations of southern and western Europe are all styled Aryans. Is there any good reason for refusing the same style to the Aryo-African inhabitants of America? The only reason (and that not a scientific one) is the sentiment that the negroid Africans stand on a lower intellectual grade than that of the negroid Dravidians or the swarthy Iberians. If such a prejudice exists, the surest way of dispelling it is by a study of the original languages of these races. It will appear that many of the African languages stand on at least as high a grade as that of the Iberian or Dravidian tongues. And this, it may be added, is not saying little, for the character of these tongues evinces a high intellectual capacity in the people who speak them.

We are thus brought to the main subject to which the present essay is devoted—the consideration of language as the test of mental capacity. And here it is just that a tribute should be paid to the candour and discernment evinced by Darwin in relation to this subject, a discernment which contrasts markedly with the blindness of some of his followers, who are physiologists and nothing else. The transcendent value of language in the intellectual equipment of the human species was clearly apparent to him. I quote the whole of the striking paragraph (Section 73 of “The Descent of Man”) in which his views are set forth:—“Man, in the rudest state in which he now exists, is the most dominant animal that has ever appeared on this earth. He has spread more widely than any other highly organised form, and all others have yielded before him. He manifestly owes this immense superiority to his intellectual faculties, to his social habits, which lead him to aid and defend his fellows, and to his corporeal structure. The supreme importance of these characters has been proved by the final arbitrament of the battle for life. Through his powers of intellect, articulate language has been evolved, and on this his wonderful advancement has mainly depended. As Mr. Chauncey Wright remarks: ‘A psychological analysis of the faculty of language shows that even the smallest proficiency in it might require more brain power than the greatest proficiency in any other direction.’ He has invented and is able to use various weapons, tools, traps, &c., with which he defends himself, kills or catches prey, and otherwise obtains food. He has made rafts or canoes for fishing or crossing over to neighbouring fertile islands. He has discovered the art of making fire, by which hard and stringy roots can be rendered digestible, and poisonous roots or herbs innocuous. This discovery of fire, probably the greatest ever made by man, excepting language, dates from before the dawn of history. These several inventions, by which man in the rudest state has become so pre-eminent, are the direct results of the development of his powers of observation, memory, curiosity, imagination, and reason. I cannot, therefore, understand how it is that Mr. Wallace maintains that ‘natural selection could only

have endowed the savage with a brain a little superior to that of an ape."

To the views so eloquently and convincingly expressed, only one qualification seems to be required; but that is one of the greatest importance. Articulate language is spoken of as an acquired art, a "discovery of man." If the habit of walking upright was a discovery of man, then in the same sense we may doubtless accept the use of speech as his discovery; but from what we know of the bodily structure of the human species, we are sure that the first members of that species, however they may have come into existence, must, after passing the period of infancy, have assumed the upright position. And from our knowledge of the vocal organs and the brain of the human species, we may be equally sure that the first human beings who had passed beyond the infantile stage must have spoken to one another in articulate language. Furthermore, as we have every reason to believe that the first human beings were as tall, as strong, and as active as any of their descendants, so we have equally good reason to believe that the language which they spoke was as well constructed and as expressive as any language that is now spoken.

This assertion may at first thought seem startling, but I believe that the more carefully it is considered and discussed, the more clearly its reasonableness will be apparent. Fortunately, however, we are not reduced to mere analogical reasoning for evidences of its truth. This can be abundantly shown by an analysis of the languages spoken by those tribes of men who, in the opinion of all anthropologists, are now in the lowest stages of culture. If it shall appear that some of these languages are as well organised and as expressive as those of the most civilised nations, it will be evident that the capacity for speech, like the capacity for walking erect, has nothing to do with culture, and that, as I have elsewhere said, to talk of "barbarous languages" is as absurd as it would be to talk of barbarous complexions, barbarous hair, or barbarous lungs.

It is deserving of remark that for the materials of the study into which we are now about to enter, we shall be indebted almost entirely to the labours of missionaries. There can be little question that one reason why linguistic anthropology, which treats man as an intellectual and moral being, has of late years been superseded by physical anthropology, which treats him as a dumb brute, is that the pursuit of the latter science—if science it can be called—is so infinitely the easier. To measure human bodies and human bones, to compute the comparative numbers of blue eyes and black eyes in any community, to determine whether the section of a human hair is circular, or oval, or oblong, to study and compare the habits of various tribes of man, as we would study and compare the habits of beavers and bees—these are tasks which are comparatively simple; but the patient toil and protracted mental exertion required to penetrate into the mysteries of a strange language (often without the aid of an interpreter),

and to acquire a knowledge profound enough to afford the means of determining the intellectual endowments of the people who speak it, are such as very few men of science have been willing to undergo. Only in rare cases has a Lepsius among the Nubians, or a Washington Matthews among the Hidatsas and Navajos, been found equal to the task. Many have gathered vocabularies, which have been useful in determining the affiliations of races, but which unfortunately at the same time, through their necessary imperfections, have given rise to gross errors, such as the current opinions that the languages spoken by barbarous peoples are poor in expression, have few general or abstract terms, have no substantive verbs, and no real inflections. For the proofs which enable us to dispel these errors and to disclose the true character of these languages and the capacity of the people who speak them, we are indebted mainly to the enlightened and indefatigable efforts of missionary zeal.

One of the most remarkable products of this zeal is the huge folio volume of the Rev. Father E. Petitot, on the language of the "Dènè-Dindjié" Indians, published in 1876 by the distinguished explorer, M. Alphonse L. Pinart, in his valuable "Bibliothèque de Linguistique et d'Ethnographie Américaines," and representing the results of twenty years of labour in one of the most uninviting regions of the earth. The "Dènè-Dindjié" are the Indians known to American ethnologists as Athabascans (a name given to them by Gallatin in his well-known "Synopsis of the Indian Tribes"),—and later and more generally as the Tinnè people. *Tinnè*, *dènè*, *dindjié* are three of the numerous dialectical forms (including also *tènè*, *danè*, *dunè*, *tinna*, *adūna*, *thinneh*, &c.) which the word for "man" assumes in the many septs of this great family, occupying the whole of that North American Siberia which spreads (south of the Eskimo) from Hudson Bay on the east to Alaska on the west, including also the northern interior of British Columbia and part of its sea-coast. It is a dreary region of rocks and marshes, of shallow lakes and treacherous rivers, offering no attractions except such as the hunter finds in the numerous fur-bearing animals which roam over it and afford to the native tribes a precarious subsistence. When this resource fails, they live on lichens, which they gather from the rocks. Their dwellings are tents of skins, or rude huts made of the boughs of the stunted trees which here and there grow in the scanty soil. The people live in small scattered bands, with little of what can be called a social organisation. M. Petitot depicts them with a strictly impartial pencil.

In bodily aspect, he tells us, they differ from the Eskimo, and resemble more nearly their southern neighbours, particularly the Sioux. They are tall and slender, with high but receding foreheads, wide cheek-bones, and prominent brows, beneath which the large eyes gleam with an ophidian lustre. The heavy upper eyelid, a little oblique, lends often to the glance something peculiarly suspicious and distrustful. The straight shining black

hair descends in heavy locks over the eyes and shoulders. The colour varies, but though clear, is never so white as that of Europeans, having always a tinge of brown.

In character the Tinneh people unite, in our author's opinion the usual defects of savages with more good qualities than are ordinarily combined with these defects. Their hard life makes them selfish, proud, severe towards women and old and weak people—though blindly indulgent to their children—and also cowardly, lazy, and deceitful. But, he adds, "how many other vices commonly ascribed to savages are unknown to them!" They are humane and gentle to their equals—are sober and averse to strong liquor; they are not vindictive; theft, rage and violence are unknown among them. They are eager for instruction, and inquire about everything, like children. They do not lack sagacity and penetration; but he adds the remark which will be found significant—"their intelligence is evidently in the swaddling clothes of infancy; their faculties are, so to speak, benumbed or shackled by a bar, which is nothing else than that forced and abnormal condition which we style barbarism."

The language spoken by these people, as it is fully analysed and minutely set forth by the author, is one of the most remarkable emanations of the human intellect. It possesses all the qualities and constituents which persons not familiar with the discoveries of modern philology are wont to regard as peculiar to highly cultivated idioms—capacity for varied expression, wealth of inflections, aptitude for word-formation, the substantive verb in different forms, and many auxiliary verbs. To give even an outline of this extraordinary language would take us beyond the reasonable limit of such an essay as the present. A few examples selected as fair specimens, must suffice.¹

The primary roots of the Tinneh language, as of the Sanscrit, are all monosyllabic, and usually have a signification of a general or abstract character; thus, *thay*, sand, really signifies "the minute, decomposed object"; *shion*, signifies age, maturity; *tthen*, bone, is understood properly to mean "the long hollow object." From these are made secondary roots by prefixing or adding a particularizing vowel—*thayé*, minute, broken up; *edjion*, ancient; *etthen*, bone. There are other derived roots or "themes" formed by prefixing to the simple roots various particles, as *de*, *da*, *ne*, *kwè*, *in*, sometimes with a slight euphonic change in the root. Thus from *thay*—(the minute, sand-like object), we have *dedhay* (the *dh*

¹ In the words of the aboriginal languages quoted in this paper, the "scientific orthography" has been employed. The elements of this orthography may be briefly described in the phrase "vowels as in Italian (or German), consonants as in English." The only additions here required are the *æ* to represent the short *u* in *but* (French *eu*, German *ö*); the Spanish *ñ* to indicate the nasalized *n*,—sometimes weak, as in the French *bon*, sometimes stronger, like our *ng* in *singer*; and the apostrophe (') affixed to various consonants and some vowels to give them an aspirate or guttural sound, as *k'* to express the German *ch* or Spanish *j*, and *r'* to indicate a strongly guttural *r* (*r grasseyé*). Slight variances of pronunciation are not important in studies of the present cast.

pronounced like *th* in *this*), meaning salt (that which resembles sand); from *shion* we have *nelshion*, grown up (that which has come to maturity); from *then* we have *dætthæn*, hard (*i.e.*, bone-like), and with two particles *in* and *kwe* prefixed and combined, replacing the initial consonants of the root, *inkwènè*, hollow and long (like a bone).

One of the most notable of these derived forms is the word for *man*. *Ni* or *ne* (which as a monosyllable usually has the consonant duplicated—*nni* or *nne*—to express an emphatic pronunciation) is the Tinneh root-word for “earth.” The particle *de* (otherwise in various dialects pronounced *dì*, *te*, *tì*, *tæ*, *thé*, &c.), which conveys the meaning of “that which is of,” or “that which pertains to,” is prefixed to this monosyllable to form the derivative term for man (*tinnè*, *dènè*, &c.) already referred to. Man is pre-eminently the being that pertains to the earth. The word corresponds, not with the Latin *vir*, but with *homo*, and in its plural acceptation means “people.” It is used, like the German *man* and the French *on* (a contraction of *homme*), as an indefinite personal pronoun in phrases corresponding to the “*man* sagt” and “*on* dit” of those languages. (*Dènè asel’ni*, *on me l’a dit*; *dènè ze’li*, *on imite*). It even becomes, on occasions, an indefinite article (but generally in an abbreviated form), when referring to human beings or to parts of the human body, as with *el’a*, father, *denet’a*, a father (*lit.*, some one’s father); *inla*, hand, *deninla*, a hand (*i.e.*, some one’s hand). The working of the combined powers of deduction, abstraction, and generalisation has rarely been exhibited in any language more strikingly than in the formation and use of this word.

It is, however, as might be expected, in the Tinneh verb that the capabilities of the language in the way of expression are most fully shown. In many other American languages, as is well known, the verb possesses an immense variety of minutely expressive forms, which, when these languages were first studied, awakened much wonder and admiration. Later on, when the physiological and “brutal” view of anthropology overpowered for a time its philological and intellectual aspect, a period of depreciation set in. Even the always candid and usually careful Darwin was so far influenced by the arguments of his ill-informed followers that he allowed himself to speak slightly of “the extremely complex and *regular* construction of many barbarous languages,” as a sign of immaturity and imperfection. If extreme complexity in language is a mark of low organisation, the Greek of Plato and the Arabic of Avicenna must take a very humble rank. On the other hand if the irregularity of grammar gives a claim to admiration, then the most complex of American languages—the Iroquois, Algonkin, and Tinneh may fairly rank beside those exceedingly irregular tongues, the Homeric Greek and the Vedaic Sanscrit, both of which, it might be added, should, in reference to the condition of the people who spoke them, be classed as “barbarous languages,” so little did Darwin,

or rather his authorities, with all their classical attainments, know of the first principles of modern philological science. To find a perfectly regular language we must look, not to barbarous tribes or civilised nations, but to the inventors of Volapük and other artificial creations of the sort.

It will not be necessary to dwell on the points in which the forms of the Tinneh verb resemble more especially those common to it with others of the highly organised American languages—the numerous conjugations, the pronominal transitions from subject to object, and the like. But certain special facts must be noticed which will show its claim to be ranked in the intellectual scale on the same level with the most notable linguistic families of the old world. It possesses and constantly employs the substantive verb in various forms. The root of the principal form is *li*, of which the present tense, with the personal pronoun prefixed, is as follows:—

SINGULAR		DUAL		PLURAL	
<i>esli</i> ,	I am.	<i>idli</i> ,	we two are.	<i>yaidli</i> ,	we are.
<i>nenli</i> ,	thou art.	<i>ali</i> ,	ye two are.	<i>yaul'i</i> ,	ye are.
<i>enli</i> ,	he is.	<i>kenli</i> ,	they two are.	<i>k'eyonli</i> ,	they are.

Examples—*dènè nenli*, thou art a man (*homo es*); *uya enli*, he is ashamed; *nezun esli*, I am good. In Tinneh, however, as in other American languages, the use of the independent substantive verb with adjectives can be avoided by incorporating the two in one word, and using, instead of *nezun esli*, *nezun nenli*, *nezun enli*, the abridged forms, *nessun*, *ninzun*, *nezun*, for I am good, thou art good, he is good.

Exactly as in the Aryan languages, this substantive verb becomes an auxiliary verb in forming secondary tenses of other verbs. With certain particles—*wa*, *wo*, &c.—prefixed to the root *li*, it helps to make the future or conditional form, thus resembling, as M. Petitot remarks, the English shall, will, should, and would. Thus, *daedi*, they say, has in the future or “eventual” tense, *daedi walli*, they will or would say.

Another very common auxiliary verb has for its root *le*, considered by M. Petitot to be the same as the word *hand*, which is *la* or *le* in different dialects. He compares its use as an auxiliary and in other respects to that of the English *do*. It may be well to give a part of its conjugation, to show the error of the common notion—which was long since exposed by Duponceau, but constantly crops up—that American languages have not proper inflections, but only agglutinative forms:—

PRESENT TENSE.

<i>asP'é</i> ,	I do.	<i>adailyé</i> ,	we do.
<i>anélé</i> ,	thou dost.	<i>adaul'é</i> ,	ye do.
<i>anlé</i> ,	he does.	<i>adanlé</i> ,	they do.

PAST TENSE.

<i>as'l'a,</i>	I did.	<i>adailya,</i>	we did.
<i>anenla,</i>	thou didst.	<i>adaul'a,</i>	ye did.
<i>anla,</i>	he did.	<i>adanla,</i>	they did.

The difference between *anlé*, he does, and *anla*, he did, is as clearly inflective as that which exists in Latin between *facit* and *fecit*. Many still more striking examples could be given, but for any who have studied these languages they will be needless. We may turn to certain classes of verbs which vary in their terminations and forms of conjugation according to the nature of the actions or ideas which they express, such as "verbs of motion," "instrumental verbs," "verbs of mental action," and the like. That there should exist in a language of wandering savages a distinct class of verbs with peculiar terminations entirely devoted to expressing the operations of the mind will seem to many persons surprising. The surprise, however, will proceed wholly from that prejudice of race which refuses to regard the people of other and especially of less cultured races than our own as endowed with natural capacities equal, and possibly superior, to those which governed our forefathers in the formation of our speech.

The "verbs of mental actions" comprise all verbs expressive of operations of the intellect and feelings, including thought, mental suffering, passion, will, and the like. They are classed in no fewer than eight conjugations, distinguished by their terminations, each conjugation having its own special form in the present, past, and future tenses. Thus *yenesshen*, I think, of the second conjugation, has in the preterite *yenidhi*, I thought, and in the future (or "eventual") *yenusshi*, I shall or may think. *Naosshær*, I commit, has for preterite *naosthilshær*, and for its future *naussthir*. It should be observed (as the last example may indicate) that the expression "mental actions" includes in this language a much wider scope than might at first thought be suspected. To this class belong not merely verbs meaning to pity, to trust, to hate, to aspire, and the like, but the verbs to punish, to forbid, to be free, to be hungry (*i.e.*, to desire food), to kill (indicating an action of the will), and even to die, which is apparently regarded as the cessation of mental power.

Any neuter or intransitive verb may be made transitive or receive a causative signification by inserting the sound of *l*, derived from *le*, to do. Thus *yenidhen* signifies he thinks, while "he thinks him good" would be *nezun ye yenildhen*, lit. "good him he deems." So *danutsar*, we weep; *da-ne-nul'tsar*, we cause thee to weep, where *da* is we, *ne* is thee, and the inserted *l* (which is aspirated for emphasis) puts the verb in the causative form.

This brief summary, or rather this series of extracts, gives only an imperfect idea of the wealth of this language, not only in forms of expression, but in the ideas which it expresses. If it be thought that this wealth is far beyond anything that the circumstances of the people can require, there are two considerations which should

be borne in mind. In the first place we must remember that the life of savages, like that of civilised men, is full of exigencies demanding the exertion of many mental faculties, and calling for an endless variety of communications between the members of a household or of a tribe. Secondly, there is in every healthy human mind, as in every healthy human body, evidence of an immense reserved force, ready for development to an almost unlimited extent. The recruiting sergeant sees, in the movements of an awkward but strongly framed rustic, evidence of the thews and sinews which will in time make the lithe and prompt artilleryman; and the philologist perceives in the speech of the savage the promise of capacity for any duties of civilisation.

In the case of the Tinnéh we are fortunately not limited to inference and prediction. The capabilities of the race have been strikingly shown. The "Tinnéh (or Athabascan) family" is a widespread one, diffused over a larger portion of North America than any other linguistic stock, except perhaps the Algonkin. As in the other hemisphere, so in this, the tribes of the bleak and barren north have sent out their swarms toward the sunny and fertile south. Ethnologists have traced their line of march by the fragmentary steps which have remained along the track, from the Mackenzie basin and Alaska, through the regions which are now the Province of British Columbia and the States of Washington and Oregon—where the Sikanis, the Takullis, the Kwalhiokwas, the Umkwás, the Totutunies and other remnants still linger,—to the fruitful river-valleys of Northern California. Here for a time the emigrants halted, and their natural capacities and character found room for development. Mr. Stephen Powers, in his excellent description of the Californian Indians, which composes the third volume of the Smithsonian "Contributions to North American Ethnology," gives a brief account of the Hupá, or Hoopas, who occupy Hoopa Valley on the Lower Trinity, north of San Francisco. Their most notable characteristic is their masterful force of character. In a vigorous passage, which I slightly condense, he tells us: "Next after the Karoks they are the finest race in all that region, and they even excel them in their statecraft, and in the singular influence, or perhaps brute force, which they exercise over the vicinal tribes. They are the Romans of Northern California in their valour and in their wide-reaching dominions. They are the French in the extended diffusion of their language. They hold in a state of semi-vassalage most of the tribes around them, exacting from them annual tribute in the shape of shell-money; and they compel all their tributaries to speak Hupá in communication with them. Although most of these petty tributaries had their own tongues originally, so rigorously were they put to school in the language of their masters that most of their vocabularies were sapped and reduced to bald categories of names. They had the dry bones of substantives, but the flesh and blood of verbs were sucked out of them by the Hupá. A Mr. White, a pioneer well acquainted with the Chimalakwe, who once had an

entirely distinct tongue, told me that before they became extinct they scarcely employed a verb which was not Hupâ. I tried in vain to get the numerals of certain obscure remnants of tribes; they persisted in giving me the Hupâ, and in fact they seemed to know no other."

But these proud and masterful children of the savage north had been quick to adopt all the arts of incipient civilisation which they found in their new abode. Their dress, implements, and houses were copied from the neighbouring tribes of the Klamath River region. The Californian currency of shell-money, which had been found highly useful in trade, was adopted by them, with certain changes in rating. One of their septs, the Tolowa, were noted for their large and handsome canoes. Mr. Powers saw one which was forty-four feet long, over eight feet wide, and capable of carrying twenty-four men or five tons of weight. It was made of redwood cedar, and seemed to him a "thing of beauty," sitting plumb and lightly on the sea, and so symmetrical that a pound's weight on either side would throw it slightly out of trim.

But the Californian valley proved too narrow for the increasing population, which sent forth new swarms to the far south-east. From one of these sprang the terrible Apaches, whose rapacious and far-swooping bands became lords of the plains and hills from the Californian gulf to Texas, and dominated for two centuries the feeble provinces of Northern Mexico,—now ravaging the settlements and now contemptuously selling them peace. A still larger swarm made its way into the highlands of Arizona and New Mexico, and found a genial abode in the sunny and grass-clad mountains which surround the stone and brick edifices of the half-civilised Pueblo Indians. These Indians had dreaded the mountains as the resort of the predatory Utes of the Shoshonee stock. The fearless Tinneh emigrants, who have since become famous under the Spanish nickname of Navajos,¹ seized these inviting uplands for their own fastnesses, drove back the Ute invaders, made friends with the Pueblo Indians, and quickly learned from them their methods of agriculture and their mechanic arts. "When the Spaniards first met them, in 1541, they were tillers of the soil, erected large granaries for their crops, irrigated their fields by artificial water-courses or *acequias*, and lived in substantial dwellings, partly underground; but they had not then learned the art of weaving the celebrated 'Navajo blankets,' that being a later acquisition of their artisans."

It is admitted on all hands that if they learned their mechanic arts from the Pueblos, they greatly improved these industries. Their blankets are as famous throughout the south-west as the carpets of Persia are throughout Asia. Dr. Washington Matthews, the highest authority on all matters relating to this people, in his

¹ Said by some to mean the Lake-people, by others the Cornfield-people. *Navajo* signifies both a pool and a plot of level ground.

² Brinton's "American Race," p. 72; citing A. A. Bandelier, "Indians of the South-western United States."

elaborate monograph on "Navajo Weavers" (published in the third annual volume of the Bureau of Ethnology), remarks: "It is by no means certain—still there are many reasons for supposing—that the Navajos learned their craft from the Pueblo Indians, and that, too, since the advent of the Spaniards; yet the pupils, if such they be, far excel their masters to-day in the beauty and quality of their work. It may be safely stated that with no native tribe in America, north of the Mexican boundary, has the art of weaving been carried to greater perfection than among the Navajos, while with none in the entire continent is it less Europeanized."

In silver-work, according to the same authority, the superiority of the Navajo artisans to those of the Pueblos, in natural aptitude and taste, is equally apparent. With inferior implements and under other disadvantages, they do equal or even better work.¹ In a letter with which Dr. Matthews has recently favoured me, he writes of this people: "Their own traditions and the works of early travellers show that they have made great advances in the last two or three centuries. This is partly due, no doubt, to contact with Pueblos and Whites, and partly to admixture of the blood of these races; but it must be largely attributed to some innate docility of the Navajo stock. Many of the wild tribes of these parts have had exactly the same advantages, and yet have not advanced as the Navajos have done. Their silversmiths have, without any instruction, greatly improved their art within the last six years. They have discovered for themselves methods of ornamenting in *repoussé* and by means of dies. Their weavers have invented some important improvements. Navajo progress forms a subject of great interest, and its causes are not easy to determine. They would probably have earlier become dwellers in permanent houses but for their superstitious notions, which constrain them to abandon a house where a death has occurred. Quite recently some of the less conservative have renounced these notions, and built themselves houses of stone."

But the intellectual powers of this remarkable people are displayed by evidences of a far higher cast than works of agriculture and mechanic arts. Their literary compositions, as they may justly be called, their religious and legendary chants, evince vivid imagination, a talent for clear and forcible expression, and a capacity for sustained and impressive narration, which no barbarous and few civilised races have surpassed. Our knowledge of those compositions is due also to the same discerning and indefatigable investigator. "The Prayer of a Navajo Shaman," which Dr. Matthews has preserved for us (in the "American Anthropologist" for April, 1888), is not so much a prayer as the relation of an intensely interesting religious or mythological experience. It is the story of a descent into the underworld for the recovery, not of a lost soul, but of a stolen "spiritual body,"

¹ "Navajo Silversmiths," by Washington Matthews, in the second annual "Report of the Bureau of Ethnology," p. 171.

which had been carried off by the chief of witches for the purpose of working woe to the visible body and to the soul of the rightful possessor, remaining on the earth. In answer to his supplication the two principal war-gods of the Navajo pantheon come from their abodes on the summits of the neighbouring mountains, and descend into the lower regions, passing gate after gate, which, though guarded by direful sentinels, yield before their magic wands. In the lowest depths they recover the fragments of the lost body, which resume their proper form, and the three return upward, through chamber after chamber, until the suppliant reaches his home, when his spirit, body, and soul are reunited, and "the world around him is restored in beauty." This is but a feeble outline of a composition which, when read, is most impressive. In all the legendary lore which the Assyrian tablets have yielded to modern explorers, there are few more interesting stories than that of the descent of the goddess Ishtar into Hades, to confront the awful queen of that realm, and recover (as it is supposed) her lost lover Thammuz, and of her restoration to the upper world.¹ The incidents bear, in certain respects, a very curious resemblance to those of the Navajo legend. But as compositions, and viewed merely as displays of literary genius, there is no comparison between the two narratives. It would be hard to deny to the ancient Assyrians the title of a civilised people; yet it must be said that their solemn record of the "descent of Ishtar," striking as it certainly is, becomes childish and barbarous when compared with the Navajo Shaman's "Prayer of the Rendition."

The Navajo "Mountain Chant," given by Dr. Matthews in the fifth "Annual Report of the Bureau of Ethnology," is a much longer and more elaborate composition, a narrative of great and varied interest, comprising historical and mythological details in vast profusion, and illustrated by many dramatic ceremonies, with numerous songs and dances, and some curious aboriginal drawings. The same exuberant yet regulated imaginative power is apparent in this as in the former production.

Certain points in the social system of the southern Tinneh require special notice. The origin and character of the Navajo and Apache *gentes* have been well described by Dr. Matthews and Captain John G. Bourke in the April-June number of the American "Journal of Folk-lore" for 1890. These *gentes*, or clans, if they may be so styled, seem all of comparatively modern origin, and apparently correspond to nothing found among the Northern Tinneh, east of the Rocky Mountains. Another and far more profound change is a matter of much greater moment. The condition of women among the Navajos is as far as possible removed from that of the tribes described by M. Petitot. Among these tribes women are slaves: among the others they are queens.

¹ See Rawlinson's "Religions of the Ancient World," chap. 2, referring to Fox Talbot, "Records of the Past," pp. 143-149.

With the northern Tinneh, wives are drudges, bought, unwooded, unloved, and abused. With the southern Tinneh, they are won by courtship, are regarded by their husbands with the warmest affection, hold their own separate property, and are consulted in all transactions of business. The change in their position is not unknown to the people themselves. It is, in fact, the subject of a curious legend, which Dr. Matthews has recorded.¹ There was a time in their early history when the men and women fell out. The women declared themselves tired of drudging for their husbands, and the sexes agreed to separate. They took opposite sides of the river on which they lived, and thus dwelt apart for four years. Then the women wearied of the separation, and wanted the help of the strong arms of their husbands. They cried across the river and begged to be taken back. While the men hesitated and debated, some of the women tried to swim across and were drowned. This decided the question, and the men took back their wives. It would be absurd to suppose that such an event really occurred, but the legend embodies the unquestionable fact of a notable change in the relation of the sexes. Nor can there be any reasonable doubt as to the origin of this change.

The common opinion that women among savage tribes in general are treated with harshness, and are regarded as slaves, or at least as inferiors and drudges, is, like many common opinions, based on error, originating in a too large and indiscriminate deduction from narrow premises. A wider experience shows that this depressed condition of women really exists, but only in certain regions and under special circumstances. It is entirely a question of physical comfort, and mainly of the abundance or lack of food. Where, owing to an inclement climate, as in arctic or sub-arctic America, or to a barren soil, as in Australia, food is scanty, and the people are frequently on the verge of famine, harsh conditions of social life prevail. When men in their full strength suffer from lack of the necessities of existence, and are themselves slaves to the rigours of the elements, their better feelings are benumbed or perverted, like those of shipwrecked people famishing on a raft. Under such circumstances the weaker members of the community—women, children, the old, the sick—are naturally the chief sufferers. The stories of the subjection of women, and of inhumanity to the feeble and aged, all come from these inhospitable regions. Where plenty prevails, as in tropical or sub-tropical America, and in most of the Polynesian islands, the natural sentiments resume their sway, and women are found to enjoy a social position not inferior, and sometimes actually superior, to that which they possess in some civilised countries. The wife of a Samoan landowner or a Navajo shepherd has no occasion, so far as her position in her family or among her people is connected, to envy the wife of a German peasant. The change which took

¹ See "A Part of the Navajos' Mythology," in the "*American Antiquarian*" for April, 1883.

place in the social condition of the Tinneh women, when their emigration had carried them from the bleak skies and frozen swamps of Athabaska to the sunny uplands and fruitful valleys of Arizona, is thus simply and naturally explained. The change was doubtless the greater because they shared with their husbands the remarkable intellectual endowments indicated by the qualities of their common language.

In another respect the influence of the emigration on the social, or rather the civil, organisation of the southern Tinneh, is not such as, according to the ordinary political theories, might have been expected. In passing from the status of savagery to one nearly approaching to civilisation, no change has been made in their peculiar and surprising system of government, if such we may term that which is really "no government." In fact, the only word which can describe it, is one which has of late years acquired a grim significance; it is simple "anarchy." M. Petitot first draws our attention to this Tinneh characteristic, and to the peculiar quality of mind which renders it possible—the utter absence of vindictiveness. "It is," he remarks, "a singular fact, and one which must give a high idea of the gentleness (*douceur*) of the Dènè-Dindjié, that though they are without any kind of government, of judges, or of laws, we nevertheless do not encounter among them any of those crimes which result from vengeful feelings—only the weaknesses which belong to our nature. The penalty of retaliation, the right of reprisal, that sort of lynch law recognised as justice and equity among Indian tribes of other stocks, do not exist among this people. Exceptions occur, but they only confirm the general rule." The so-called chiefs, we are told, whom the people assume, or rather whom the Hudson Bay officials give them, have no other prerogative than that of directing their hunting parties and their trips to the trading posts.

Mr. Powers makes a singularly like report concerning the warlike Hupà, those conquering Romans of Northern California. "Politically," he tells us, "the Hupà are fatally democratic"—though why the expression "fatally" should be applied to this prosperous tribe is not apparent. "There is no head chief," he assures us, "even for war." Every man fights as he chooses, only taking care to keep near the main body of the warriors. They have, indeed, "well-established laws, or rather usages," as regards both civil rights and personal injuries, but the methods of dealing with these evince the same placability as that which M. Petitot records. "For instance," Mr. Powers explains, "if two Hupà have a quarrel, and it is not settled on the spot, they refuse to speak to each other; but if after a while one desires to open friendly relations, he offers to pay the other man a certain amount of shell money. If this offer is accepted they *exchange moneys*, not necessarily in equal amounts, and perfect friendship is restored."

An able and impartial historian—Mr. J. P. Dunn—gives a

closely similar account of the Navajos.¹ One characteristic of this people, he tells us, "is their form of government, or rather their lack of government. When they came under our control they numbered about 12,000, of whom 2,500 were warriors; but notwithstanding their numbers, and the extent of country they occupied, they had scarcely any central controlling power, and what power there was was on a democratic basis. No particular form of government obtained among them, a man having as absolute control over his children while they lived with him as of his slaves; but once a warrior, a man was his own master, and once married, a woman was largely her own mistress. Head chiefs were made and unmade with little ceremony, and the pledges of a head chief appeared to have little weight, either while he was in office or afterwards. On account of this lack of executive power, there was no enforcement of law, and little law to enforce. Religious scruples were the chief restraining power." "Major Backus," we are told, "once asked a Navajo chief how they punished their people for theft. 'Not at all,' he replied. 'If I attempt to whip a poor man who has stolen my property, he will defend himself with his arrows and will rob me again. If I leave him alone he will only take what he requires for the time.'"

It is a point of much interest to ascertain in what degree a people of these peculiar characteristics, differing so widely in certain respects from most American tribes—brave and independent, but neither cruel nor revengeful, intelligent, ingenious, industrious, eager for acquiring property, yet with no law but usage, and no means of enforcing this usage beyond the influence of public opinion and of their own religion—have thriven in the agitated world of Western America, where lawless force or forceful law alternately dominate all other communities. This result we learn from the latest and best authority—the Reports of the U.S. Commissioner for Indian Affairs.

In 1889 the tribe was computed by the local agent to number some 21,000 souls, or about the twelfth part of all the Indians in the United States, exclusive of Alaska. Twenty years earlier their number was computed at only 13,000, showing a remarkable increase. That this increase was natural, and not due to accessions from other tribes, is made evident by the "vital statistics," which return for the previous year 1,400 births to 700 deaths. Their vast reservation of 3,500 square miles—as large as some European kingdoms—is spread over a mountain region elevated six thousand feet above the sea, and "for picturesque grandeur not to be excelled in the United States." But of their more than two millions of acres, only some sixty thousand could be cultivated, and those only by artificial irrigation. The Indians, however, had managed to till about eight thousand acres, on which they raised good crops of wheat, maize, potatoes, melons, onions, and other vegetables; but the mountains afford abundant pasturage, and

¹ "Massacres of the Mountains; a History of the Indian Wars of the Far West." By J. P. Dunn, jr. (1886); p. 251.

the wealth of the people is in their "stock." They owned in 1889 the immense number of 250,000 horses, 700,000 sheep, and 200,000 goats. "By common consent," the agent writes, "the sheep are considered the property of the women, and are clipped in the spring and fall of each year." The wool crop of the previous year had exceeded two millions of pounds, most of which, after reserving the needed supply for wearing, they had sold to the white traders in the neighbourhood. The four thousand matrons of this industrious tribe must be among the wealthiest women in America. So well-disposed are the people that the agent had no serious offences of any kind to report. In this large territory, filled with a property of a kind most tempting to Indian cupidity, a small band of twenty-five native policemen had been ample for maintaining order. "Heretofore," the agent reports, "it had been the custom to have a white man for chief of police, but I allowed the force to select one of their own number, and the result has been better satisfaction and greater efficiency." "The Indians and the white settlers on the outside of the reservation," we are further told, "are on good terms, and apparently cultivate friendly relations." Their own disputes are usually "settled among themselves." Their nominal chiefs have hardly any influence; their advice is seldom sought; and when offered is rarely accepted. In cases of difficulty "the matter is generally laid before the agent, whose decision and advice are accepted in good faith." The only troubles which the agent had encountered in this modern Utopia, during his five months' tenure of office, had arisen from the inclination of the people for gambling. On this subject he reports that "when a crowd of them met at the agency, it was the custom to spread a blanket anywhere and indulge their favourite proclivity. This," he adds, "led to petty thieving in several cases, which I promptly punished, and broke up the indulgence in this locality." After mentioning some trouble between the Navajos and the neighbouring Moquis, caused by horse-stealing, which was settled in a council of the tribes, and a single case of homicide, in self-defence, he remarks: "This is the sum total of sins of commission among 21,000 ignorant and uncivilised American Indians, as reported to me in a little over five months; and the Navajos invariably report the wrong-doings of their neighbours." To this statement this clear-headed and benevolent agent, Mr. Vandever, adds the natural inquiry: "Can any community of like numbers in the civilised world make so good a showing?" It should be mentioned, as an evidence that the virtues as well as the accomplishments of the Navajos are mainly of home growth, that there had been no missionaries among them, and that only about a hundred of them knew "enough of English for ordinary intercourse."

Something should be said of that other branch of the southern Tinneh, the Apaches, who have until recently borne such a formidable reputation. In the opinion of careful inquirers, this reputation, if naturally earned, has not been properly deserved. As is

well known, the early Spanish settlers brought with them the conquering and grasping mood which then prevailed in their mother country, and which allowed in the native tribes no other choice than that between absolute subjection and perpetual hostility. The Apaches, safe in their fastnesses of desert and mountain, quick-witted and resolute, refused to submit, and were compelled to fight. Two centuries of this exasperating warfare bred in them an embittered temper, not natural to their race. Some years elapsed after the transfer of their country from Mexican to Anglo-American rule before they were made to understand that their new neighbours desired neither to enslave nor to exterminate them. As this conviction grew, a marked change has appeared in their disposition and conduct. Those who have been gathered on reservations and well treated begin to show the natural qualities of their stock. In 1889, the Apaches on the Mescalero reservation in New Mexico numbered 474. The agent, Mr. Bennett, reports of them:—"Their general behaviour and conduct have been most excellent, not a crime having been committed by them during the year either against Whites or Indians, and not a case of drunkenness nor a quarrel of any kind among them since I assumed charge. Very many are quite skilfully cultivating their little farms, and many more would be doing so were they supplied with teams and implements." "Since assuming charge of the agency," he continues, "I have re-organised our police force of eleven men, and find them obedient, cheerful in the performance of their duties, and always ready and willing to execute all commands given to them. They are kept almost constantly on the move, always on duty, visiting the various outlying camps, and herding beesves. They take good care of their uniforms, arms, horses and accoutrements, and are proud of the distinction conferred upon them."

The Government has established a boarding-school on the reservation. This school, the agent remarks, was temporarily "closed in May last, by reason of the resignation of the superintendent, since which time the boys have been doing most excellent work on the school farm, of which they are justly proud. As the result of their labour they will supply the school through the winter with an abundance of vegetables, and their cows and calves with hay, corn, and oats. The six girls, though young, are making good progress in housekeeping, cooking, needlework, etc., and are bright, intelligent, and ladylike in their deportment."

There seems something almost pathetic in this description, when we recall to mind that these industrious and well-conducted farmers, these docile and faithful policemen, and these zealous boy-pupils and "bright and lady-like girls," belong to that direful brood of ferocious and untameable Apaches, against whose utter extermination hardly a voice was raised, some twenty years ago, on either side of the Anglo-Mexican boundary, except here and there perhaps in the mild remonstrance of some "visionary" philanthropist.

But the ethnologist, who really understands the science which he

professes to pursue, has no reason to be surprised at any progress which the Navajos or their congeners have made or may hereafter make. Any one who will take the trouble to study in M. Petitot's work the language of their original stock will be satisfied that none but a people possessing powers of observation, reflection, and discrimination in a very high degree, could have spoken such a language. The remark of Prof. Max Müller concerning the language of the Iroquois (which he learned from an Oxford student of that race), that the people who fashioned such a speech must have been "powerful reasoners and accurate classifiers,"¹ will apply with even greater force to the speakers of the Tinnéh idiom. If we accept the rule proposed by my able and learned friend, Dr. Brinton, in his work on "The American Race,"² that "the final decision as to the abilities of a race or an individual must be based on actual accomplished results, not on supposed endowments,"—qualifying this rule merely by a just regard to the circumstances under which the results are achieved,—we may fairly ask where among all the races of the earth shall we find a community which in the course of so brief a term as five or six hundred years—to which, according to the facts at present known to us, the residence of the southern Tinnéh in their present abodes has been limited,—has, with such slight foreign assistance, achieved such remarkable results. A few hundreds of ignorant and poverty-stricken emigrants from the far north have developed into a wealthy commonwealth, maintaining a prosperous and peaceful independence, winning the respect and goodwill of its neighbours, both civilised and savage, developing a high degree of ingenuity in some of the most delicate and difficult mechanical arts, and producing poetical compositions fit to rank with or above the most notable productions of the founders of civilisation—the Assyrians and Egyptians. Such, it is believed, is a fair statement of the results on which, in this case, the students of linguistic ethnology may found a just claim in favour of the methods and principles of their science.

We now turn to another part of the globe, and to a very different race and language, both of which will afford some highly instructive lessons. By the common consent of those ethnologists who do not base their science upon linguistic tests, the Australians are ranked among the lowest, if not as the very lowest, of the races of men. In the time of that pre-scientific anthropology which prevailed half a century ago, when the various human races, as well as the various species of animals, were supposed to have somehow come into being in the regions which they inhabited, the Australians, dwelling in a continental island of a past geological era and amid animals of the most primitive mammalian forms, were held to belong to a distinct human species, as primitive and as imperfect as its surroundings. The Darwinian system swept away

¹ From a letter quoted in my "Iroquois Book of Rites," p. 98.

² See p. 42 of that work.

this fanciful notion ; but, ill understood by some of its votaries, it has given rise to another fancy hardly less opposed to the principles of true science. The Australians have been accepted by some distinguished members of this school (though not by Darwin himself) as the best surviving representatives of the earliest men of the present human species. Their reasoning may be stated succinctly in a syllogistic form, as follows. The earliest men of the existing species must be supposed to have been the lowest of men in intellectual capacity and in social condition. The Australian aborigines are now the lowest of men in intellect and in social condition. They must therefore be deemed to represent more nearly than any other race the character and social condition of the earliest men.

Both premises assumed in this reasoning are mere assumptions, which are not only not based upon facts, but are opposed to the clearest indications derived from the actual data we possess. There is no better reason for supposing the earliest men of the present species to have been low in intellectual capacity than there is to suppose them to have been small in stature and physically weak. The men who combated and overcame the monsters of the quaternary era, the mammoth, the cave-bear, and the cave-lion, and whose earliest historical offspring reared the vast architectural piles of Egypt and Assyria, must have been as vigorous in mind as in body. As for their supposed modern representatives, the Australians, it is astonishing that highly educated men, professors of philosophy, who undertake to treat of the intellect of a race, should refuse to consider that prime and incomparable exponent of intellect, the language. Whether we accept the view of Max Müller and the high authorities whom he cites on his side—that speech and reason are identical (or rather, like heat and motion, are different manifestations of the same force)¹—or whether we retain the more common opinion that speech is the expression of thought—in either case the language of a people ought to be the first evidence to which we should resort in judging of its intellectual endowment. We may now briefly consider this invaluable evidence, and some very curious and unexpected conclusions to which it leads.

The earliest attempt to explain the complex system of Australian speech was made by a zealous and experienced missionary, the Rev. L. E. Threlkeld, of New South Wales. His work, a pamphlet of some 130 pages, entitled "An Australian Grammar, comprehending the principles and natural rules of the language, as spoken by the aborigines in the vicinity of Hunter's River and Lake Macquarie, in New South Wales," was published at Sydney in 1834. The author had been previously a missionary in the Society Islands, and had acquired a knowledge of the language there spoken ; but while the Tahitian alphabet was found nearly sufficient in his new field, the simple Polynesian grammar afforded

¹ "The Science of Thought," chap. i.

him no aid in unravelling the difficult web of the Australian speech. A few years after his grammar was published I had the pleasure of visiting him at his mission, and witnessing his assiduous efforts for the benefit of his humble charges. His manuscripts, which he freely communicated to me, showed his constant progress in his studies of the language, of which he had found it as hard to fathom all the depths as his successors have found it to discover all the mysteries of the social organisation of this singular people.

The pronunciation of the language is simple and euphonious. The consonants *s*, *f*, and *v* are lacking. The only sound strange to English utterance is the *ñ* (*ng* as in *singer*) when it is an initial, as *ñato'a*, I; *ñinto'a*, thou. The vowels are sounded as in Italian or German, except the *ũ*, which represents the English *u* in *but*.

There are seven declensions, two of which are restricted to proper names, the one of persons, the other of places. The remaining five declensions comprise the common nouns, and are distinguished by the terminations of the nominative. Each declension has ten or eleven cases, comprising two nominatives, a genitive, two datives, an accusative, and four or five ablatives. It would be easy to furnish a special name for each case, but for our purpose it is needless. The fact which chiefly calls for remark is that the language discriminates in its cases with more logical nicety than any of the Aryan tongues. In the nominative, for example, there is a neuter or ground form, used in answer to the question, Who (or What) is it?—and an active form which governs the verb, and answers the question, Who (or What) did it? There is a dative expressing “for” the object, and another expressing “to” the object; and the various ablatives express “on account of,” “from,” “along with,” “staying with,” etc. The character of these declensions can be most clearly shown by giving examples of the first and second. In the first, *Biraban*, which means “Eagle-hawk,” is declined as a proper name, and in the second as a common noun.

FIRST DECLENSION.

Simple nom.	<i>Biraban</i> ,	<i>Biraban</i> .
Active nom.	<i>Birabanto</i> ,	B. does, did, will, &c.
Genitive	<i>Birabanumba</i> ,	<i>Biraban's</i> .
1st dat.	<i>Birabannũ</i> ,	for B.
2nd dat.	<i>Birabankinko</i> ,	to, toward B.
Accusative	<i>Birabannũ</i> ,	<i>Biraban</i> .
1st abl.	<i>Birabankai</i> ,	on account of B.
2nd abl.	<i>Birabankabirũ</i> ,	away from B.
3rd abl.	<i>Birabankatoa</i> ,	along with B.
4th. abl.	<i>Birabankinbo</i> ,	staying with B.

SECOND DECLENSION.

Simple nom.	<i>biraban</i> ,	a hawk.
Active nom.	<i>birabanto</i> ,	a hawk does, &c.
Genitive	<i>birabankoba</i> ,	a hawk's.
1st dat.	<i>birabanko</i> ,	for a hawk.
2nd dat.	<i>birabantako</i> ,	to a hawk.

Accusative	<i>biraban,</i>	a hawk.
1st abl.	<i>birabantin,</i>	on account of a hawk.
2nd abl.	<i>birabantabirūn,</i>	away from a hawk.
3rd abl.	<i>birabantoa,</i>	along with a hawk.
4th abl.	<i>birabantaba,</i>	staying with a hawk.

It will be evident at a glance that these declensions are formed by affixing to the nouns certain particles of the class which we call prepositions, but which would here be more accurately styled postpositions. In this manner, as is well known, scholars suppose that the Aryan cases were originally formed. There seems no particular reason for holding that the closer union of the Aryan affixes to their nouns is evidence of a higher degree of intellect or culture in those who utter them; but if any person of Aryan descent chooses to gratify his pride of race by maintaining such an opinion, it would be idle to seek to disabuse him. The main point to be considered is the clearness of expression which these varied affixes must give to a sentence in linking the nouns and pronouns (which are also fully declined) to the other parts of speech.

The verbs have not the variety of "classes" which are found in the Tinneh and many other American languages; nor have they inflections for person and number, which are always expressed by separate pronouns. In this respect, as in some others, the language is highly "analytic." But the forms of tenses and moods are very numerous. The root or ground-form of the verb is usually a word of one or two syllables, and to this ground-form various particles are appended, which modify the signification, and sometimes protract the word to a considerable length. The following are only a few specimens, derived from the conjugation of the verbal root *bu* or *bun*, to strike. (The nominative pronoun *ban*, I, is understood.)

MOODS OR FORMS.

Active transitive form,	<i>buntan,</i>	I strike.
Definite, or participial,	<i>bunkilin,</i>	I am striking.
Continuative,	<i>bunkililin,</i>	I am continually striking (as threshing, beating, &c.).
Reflective,	<i>bunkileün,</i>	I struck myself.
Reciprocal,	<i>bunkilan,</i>	we strike one another.
Optative,	<i>buwil,</i>	I would strike, or, that I might strike.
Deprecatory,	<i>buntea kün kon,</i>	lest I should strike.
Imperative,	<i>buwa,</i>	strike.
Infinitive,	<i>bunkiliko,</i>	in order to strike.

TENSES.

Present,	<i>buntan,</i>	I strike.
Remote past,	<i>buntala,</i>	I struck formerly.
Recent past,	<i>bunküla,</i>	I struck lately.
Recent pluperfect,	<i>bunküla-ta,</i>	I had lately struck.
Hodiernal past,	<i>bunkeün,</i>	I struck this morning, or to-day.
Future aorist,	<i>bunña,</i>	I shall strike.
Crastinal future,	<i>bunkin,</i>	I shall strike to-morrow.
Inceptive future	<i>bunkili-kolañ,</i>	I am going to strike.

There are several forms of the simple substantive verb, the most usual being *ka*, a root which signifies "being or existence, in time, place, or state." It is used apparently in all respects like the Latin *esse* or the English *be*, and is conjugated throughout all the forms and tenses. The participle is *kan*, being, as "I being afraid," *kinta kan ban*, lit., afraid being I. The preterite is *kakūla*; as *būka ban kakūla*, I was angry (angry I was). Imperative, *kauwa*, be; as *korūn kauwa*, be still (quiet be). It is also used as an auxiliary with other verbs.

Verbs have, as in Latin, four conjugations,—using this term, as in that language, to signify different modes of inflecting verbs. As in Latin, also, they are distinguished by the termination of the infinitive. Verbs of the

1st conjugation end in *ūliko*, *oliko* and *eliko*.

2nd " " *kiliko*.

3rd " " *biliko*.

4th " " *riliko* and *tiliko*.

These conjugations differ in the formation of the tenses as follows:—

	PRESENT.	REMOTE PAST.	RECENT PAST.	FUTURE.	PARTICIPLE.	INFINITIVE.
1.	<i>an</i>	<i>ala</i>	<i>a</i>	<i>ūnūn</i>	<i>ūlin</i>	<i>ūliko</i>
	<i>an</i>	<i>ala</i>	<i>a</i>	<i>ūnūn</i>	<i>olin</i>	<i>oliko</i>
	<i>an</i>	<i>ala</i>	<i>a</i>	<i>ūnūn</i>	<i>elin</i>	<i>eliko</i>
2.	<i>tan</i>	<i>tala</i>	<i>kūla</i>	<i>nūn</i>	<i>kilin</i>	<i>kīliko</i>
3.	<i>bin</i>	<i>biala</i>	<i>bia</i>	<i>binūn</i>	<i>bilin</i>	<i>biliko</i>
4.	<i>rin</i>	<i>rala</i>	<i>rea</i>	<i>rinūn</i>	<i>rilin</i>	<i>riliko</i>

There are many verbs which are combined with other verbs and with adjectives to vary their meaning. Thus, *mūnbili*, to permit, added to the root, *bu*, to strike, forms *bumūnbili*, to permit to strike, *Mali*, to make or do, gives a causal signification, as *kola*, secret, *kolamali*, to conceal; *tūr*, broken, *tūrmali*, to break. *Kūli*, signifies spontaneous action, as *tūrkūli*, to break of itself, *Būli*, signifying "to be in any act," forms active verbs as, *tēt*, dead, *tetibūli*, to be dying. *Mainūli*, or *maina*, gives to the preceding verb the meaning of failure or incomplete operation, as *na*, to see, *namainūli*, to look without observing, *nūrū*, to hear, *nūrūmainūli*, to hear but not to attend. *Bu*, to strike, *bumaina bon ban*, I nearly struck him, or did not quite strike him; lit., "to strike failed him I."

But perhaps the most notable excellence of this language is found in its verbal nouns, or nouns derived from verbs, by the aid of various inflections or affixes, which enable the speaker at once to give an intelligible name to any object, act, or quality. The modern English and the modern Romanic tongues—mere "jargons" which arose out of the conquests and convulsions of the dark ages,—have lost in a large measure that happy Aryan facility of word-formation which was possessed by the Greek and Sanskrit, and to a less degree by the Latin, and which is still retained by the German. This useful facility is enjoyed in the

TABLE OF AUSTRALIAN DERIVATIVES.

1. THE VERB.	2. THE AGENT.	3. THE ACTOR.	4. THE INSTRUMENT.
1. <i>bunkili</i> , to smile	<i>bunkilikan</i> , smiter	<i>bunkiye</i> , boxer	<i>bunkilikane</i> , cudgel
2. <i>uwali</i> , to walk	<i>uwalikkan</i> , walker	<i>uwaliye</i> , wanderer	<i>uwalikane</i> , couch
3. <i>mankili</i> , to take	<i>mankilikan</i> , taker	<i>mankiye</i> , thief	<i>mankilikane</i> , trap
4. <i>umali</i> , to do	<i>umalikkan</i> , maker	<i>umaiye</i> , artisan	<i>umalikane</i> , tool
5. <i>wiyali</i> , to speak	<i>wiyalikkan</i> , speaker	<i>wiyaliye</i> , commander	<i>wiyalikane</i> , book
6. <i>yawwali</i> , to sit	<i>yawalikan</i> , sitter	<i>yawaliye</i> , idler	<i>yawalikanane</i> , seat
7. <i>nurali</i> , to hear	<i>nuralikan</i> , hearer	<i>nuraiye</i> , listener	<i>nuralikane</i> , ear-trumpet
8. <i>nukili</i> , to give	<i>nukilikan</i> , giver	<i>nukiye</i> , almoner	<i>nukilikane</i> , shop
9. <i>kurili</i> , to carry	<i>kurilikan</i> , carrier	<i>kuriye</i> , porter	<i>kurilikane</i> , yoko
10. <i>inolomali</i> , to protect	<i>inolomalikan</i> , protector	<i>inolomaiye</i> , saviour	<i>inolomalikane</i> , safeguard
11. <i>pirikili</i> , to recline	<i>pirikilikan</i> , recliner	<i>pirikiye</i> , sluggard	<i>pirikilikane</i> , couch
12. <i>tivali</i> , to seek	<i>tivalikan</i> , seeker	<i>tivaliye</i> , searcher	<i>tivalikane</i> , drag
13. <i>wunkili</i> , to leave	<i>wunkilikan</i> , leaver	<i>wunkiye</i> , magistrate	<i>wunkilikane</i> , watch-house
14. <i>upali</i> , to perform	<i>upalikkan</i> , performer	<i>upaiye</i> , writer	<i>upalikane</i> , pen
5. THE DEED.	6. THE ACTION.	7. THE PLACE.	
1. <i>bunkilito</i> , blow	<i>bunkilita</i> , smiting	<i>bunkilūnil</i> , pugilistic ring	
2. <i>uwalito</i> , journey	<i>uwalita</i> , walking	<i>uwalinūnil</i> , parade-ground	
3. <i>mankilito</i> , grasp	<i>mankilita</i> , taking	<i>mankilūnil</i> , a bank	
4. <i>umalito</i> , work	<i>umalita</i> , working	<i>umalinūnil</i> , manufactory	
5. <i>wiyalito</i> , speech	<i>wiyalita</i> , speaking	<i>wiyalūnil</i> , pulpit	
6. <i>yawalito</i> , session	<i>yawalita</i> , sitting	<i>yawalūnil</i> , pew	
7. <i>nuralito</i> , attention	<i>nuralita</i> , hearing	<i>nuralūnil</i> , town (for news)	
8. <i>nukilito</i> , liberality	<i>nukilita</i> , giving	<i>nukilūnil</i> , market	
9. <i>kurilito</i> , carriage	<i>kurilita</i> , carrying	<i>kurilūnil</i> , wharf	
10. <i>inolomalito</i> , protection	<i>inolomalita</i> , protecting	<i>inolomalūnil</i> , fortress	
11. <i>pirikilito</i> , rest	<i>pirikilita</i> , reclining	<i>pirikilūnil</i> , bed-room	
12. <i>tivalito</i> , search	<i>tivalita</i> , seeking	<i>tivalūnil</i> , the woods	
13. <i>wunkilito</i> , resignation	<i>wunkilita</i> , resigning	<i>wunkilūnil</i> , watch-house	
14. <i>upalito</i> , performance	<i>upalita</i> , performing	<i>upalūnil</i> , a desk	

highest degree by the languages of Eastern Australia. The following table of derivatives does not appear in Mr. Threlkeld's Grammar, but was prepared by him at a later date, and was copied by me from his manuscript. It shows in a striking light the advantages which the language derives from this source, both for discriminating nice shades of meaning, and for devising names descriptive of new objects. It also displays, both in the language and in the people, a remarkable aptitude for expressing abstract ideas.

Mr. Threlkeld's notes explained that a musket (as well as a cudgel) is called *bunkilikane*, because it strikes with the ball; and the same word is applied to a hammer or mallet. A magistrate is called *wunkiye*, when he resigns or commits an accused person to a jailer: and hence a watch-house or jail is called either *wunkilikane*, a means of committing, or *wunkilinel*, a committing-place. *Upali* signifies, properly, to do anything with an instrument; hence *upaiye* might be applied to a painter or cobbler, as well as to a writer, and *upalikane* would then mean a brush or awl. To the foregoing list might have been added a column of very expressive derivatives ending in *toara*, and having a passive signification, as *buntoara*, that which is struck (as a drum or a bell), and *umalitoara*, that which is made or done, as any piece of work.

It is now ascertained that all the tribes of Australia speak "dialect-languages" belonging to one stock. This fact I was able to determine for those of the eastern portion by vocabularies collected during my visit. At a later day my distinguished friend, Dr. Friedrich Müller, of the Novara expedition, had opportunities of extending his observations and collections over all the coasts, with the same result. A grammatical sketch kindly furnished to me by a well-informed missionary, the Rev. William Watson, of Wellington valley, two hundred miles west of Mr. Threlkeld's station, showed that the construction of the language remained substantially the same, but the forms were, in general, fewer and less complex. Several cases of nouns had been lost, and the verbal derivatives were less numerous. According to Dr. Müller, this grammatical decay continues to the west coast, where the languages, though retaining the pronouns and other words indicating their original affinity, have become in a large degree formless. This fact will be found significant as we proceed.

It becomes a matter of great interest to determine the true character and the ethnological affinities of the people speaking this remarkable group of languages. The first observation to be made is that there is something enigmatical, at the first view, both in their physical appearance and in their intellectual manifestations. The former, as described in my notes made on the spot, combines the peculiarities which anthropologists have been accustomed to ascribe to totally distinct races:¹ "They are of middle height, with

¹ "U.S. Exploring Expedition," vol. vii: "Ethnography and Philology," p. 107.

forms fairly well proportioned. The cast of the face is a medium between the African and the Malay types. The forehead is narrow, sometimes retreating, but often high and prominent; the eyes are small, black, and deep-set; the nose is much depressed at the upper part between the eyes, and widened at the base, but with this it frequently has an aquiline outline. The cheekbones are prominent. The mouth is large, with thick lips and strong well-set teeth. The jaws project, but the chin is frequently retracted. The head, which is very large, with a skull of unusual thickness, is placed upon a short and small neck. Their colour is a dark chocolate, or reddish black, like that of the Guinea negro, but varying in shade so much that individuals of pure blood are sometimes as light-coloured as mulattos. That which distinguishes them most decidedly from other dark-skinned races is their hair, *which is neither woolly*, like that of the Africans and Melanesians, nor frizzled like that of the Feejeeans, nor coarse, stiff, and curling, as with the Malays. *It is long, fine, and wavy, like that of Europeans*. When neglected, it is apt, of course, to become bushy and matted, but when proper care is taken of it, it appears as we have described. It is sometimes of a glossy black, but the most common hue is a deep brown. Most of the men have thick beards, and their skins are more hairy than those of whites.

The like perplexing contradictions appeared in their intellectual and moral traits. The same notes state the opinion then formed,—that “it is doubtful what grade of intellectual capacity is to be ascribed to this people.” While, on the one hand, “the impression produced on the mind of a stranger by an intercourse with the aborigines in their natural state is that of great mental obtuseness, or, in plain terms, an almost brutal stupidity,” it is noted that “several who have been taken from the forest when young, and have received instruction, have shown a readiness in acquiring knowledge and a quickness of apprehension which have surprised their teachers.” In particular, their aptitude for learning languages and for music surpassed that of most white children. Their moral qualities had many singularities, but few of a repulsive character. To the Whites, whom they regarded with a mixture of distrust and contempt, they seemed sullen, suspicious, and inordinately proud. Nothing would induce them to acknowledge any human being (of their own age) their superior, or show

¹ I have italicized some words, not merely to draw attention to the important fact mentioned, but also to correct an unaccountable error of my learned friend, Dr. Gerland, who in his continuation of Waitz's great work (“*Anthropologie der Naturvölker*”) quotes from my volume, with some abridgment, the foregoing description of the Australian people, generally in a correct manner, but making me say of the hair, “it is long, fine and *woolly*!” Dr. F. Müller, naturally startled by this extraordinary statement (which would be much like a description of the Eskimo as having black skins), has in his “*Allgemeine Ethnographie*” (2nd edit., p. 205) devoted a long footnote to the correction of my supposed error. He evidently had not at the time seen my volume, which was thus strangely misquoted, and of which in his later master-work, the “*Grundriss der Sprachwissenschaft*,” he has made considerable and always accurate use.

any mark of deference. Among their own people they were trained to exhibit a profound respect for age; and in their warfare, or rather their tribal quarrels, they were never blood-thirsty or implacable. Their contests were not conducted by treacherous surprises and massacres, but always with fair warning. The death of a single combatant usually ended a battle; after which followed a scene of recrimination, abuse, and explanation. "All hostility was then at an end, and the two parties mixed amicably together, buried the dead, and joined in a general dance."

Since this account was written many able investigators—missionaries and ethnologists—have made careful studies of this singular people, and the results have explained much that then seemed difficult to understand. It has become clear that if they are low in culture, they had yet in fact attained the utmost elevation which was possible in their surroundings. The nature of their country, the scantiness of food, and the frequent droughts, which compelled them to scatter over an immense surface and kept them constantly on the move, made all settled habits, and consequently all progress, impossible. The wisest of Aryan or Semitic communities, cast without resources into the interior of an almost barren continent, and compelled to subsist on wandering game, on roots and vermin, would speedily be pressed down by an iron necessity to the same level as that of these Australians. It may be doubted whether there are many communities which would have resorted to the same ingenious devices to mitigate the hardships of their lot, and preserve the amenities and safeguards of social life. It has been ascertained that nearly the whole of Australia, from shore to shore, was covered by a network of social regulations most happily devised for maintaining order and promoting friendly intercourse. Where all families were equally poor and equally independent, there could be no distinction or control either from rank or from wealth. The framers of their polity, therefore, fell back upon the natural and primal distinctions of age and sex. The elders were in all cases to rule, and the younger implicitly to obey. The intercourse of men and women was to be guarded by the most stringent rules, protecting women from the violence of youthful passion or brutal strength, and placing her under the guardianship of her whole people, and more especially of a certain class of the people who were bound by ties of family or clanship to protect her. The common opinion that wives are captured by violence among the Australians is an exploded error. On the contrary, there are few races among whom the regulations respecting marriages are more strict or their violation more rigorously punished. The system of "marriage classes" and totemic clans, moreover, extending throughout almost the entire island, is a sort of social freemasonry, or artificial relationship, furnishing to every Australian of any tribe cousins or colleagues in every other tribe, who are bound to receive and protect him. It is the opinion of Mr. A. W. Howitt,

who is the highest authority on this subject, that this ingenious and useful system is a work of legislation which has been deliberately devised and perfected for the general welfare by the Australian law-makers through a series of generations.¹

We have now to consider a point of great importance. As it is certain that the Australian stock was derived from some other region, ethnologists have naturally been led to seek for the mother country of this interesting people. The search has been successful, but the surprise to the seekers has been great, and the result to some of them not a little distasteful, as upsetting many cherished theories about "primitive man." The Australians are found to belong to the Dravidian family, which, prior to the Aryan invasion, occupied nearly the whole of Hindostan, and which still holds the southern portion of the peninsula, in some ten or twelve nations or tribes, speaking closely allied languages, Tamil, Telugu, Malayalam, Kanarese, Tula, Kudagu, Toda, &c., and numbering altogether nearly fifty millions of people.² It is, therefore, one of the most important of the great linguistic families of the globe. The character of the speakers of these languages ranks high. On this point there can be no better witness than Sir Monier Williams, the eminent Sanskrit scholar, who, in a recent work, thus describes them:—

"Of the Dravidians the Telugu and Tamil speakers are by far the majority, each numbering fifteen or sixteen millions. The Tamil race, who occupy the extreme south from Madras to Cape Comorin, are active, hard-working, industrious, and independent. Their difficult and highly accentuated language reflects their character, and possesses quite a distinct literature of its own. The Telugu people, inhabiting the Northern Circars and the Nizam's territory, are also remarkable for their industry; and their soft language, abounding in vowels, is the Italian of the East. The Kanarese of Mysore resemble the Telugu race in language and character, just as the Malayalams of the Malabar Coast resemble the Tamils. I noticed that the seafaring Tamils of the southern coast are much more able-bodied than the ordinary Hindus. Numbers of them migrate to Ceylon, and at least half a million form a permanent part of the population of that island. They are to be found in all the coffee plantations, and work much harder than the Singalese. Indeed, all the races of South India seem to me to show readiness and aptitude for any work they are required to do, as well as patience, endurance, and perseverance in the discharge of the most irksome duties." "As servants they are faithful, honest, and devoted, and will attach themselves with far greater affection than English servants to those who treat them well. They show greater respect for animal life than Europeans. They have more natural courtesy of manner, more

¹ "Journal of the British Anthropological Institute" for August, 1888, p. 66.

² "The Modern Languages of the East Indies." By Robert N. Cust, p. 66.

filial dutifulness, more veneration for rank, age, and learning, and they are certainly more temperate in eating and drinking."

Some of these qualities, especially independence, filial affection, and respect for age, reappear as well-known characteristics of the Australians, whom the Dravidians also recall in their dark skins and their long and wavy hair.

The immense influence of the Dravidian race in Indian history has been too little regarded. When the Aryans, about fifteen hundred years before the Christian era (as is commonly held), entered north-western Hindostan and began their conquest of the country, they were a race of barbarous herdsmen, but little higher in culture than the Zulus and Bechuanas of South Africa. The researches of Hehn, Schrader, and other careful German archæologists, leave no question on this point.² They were a wandering race, depending mainly on their cattle and sheep for food and clothing, ignorant of the smelting of metals, living in circular huts of wattle and straw, excessively superstitious, domineering, and cruel, and consumed with the land-hunger which possesses all pastoral races. That they were a people of strong intellectual powers is evident from their language. The Sanskrit, with all its defects, which are neither few nor small, could have been spoken only by a highly gifted race. That they were brave and resolute is also apparent from their history. It is equally evident from this history, as it may be gathered from the Rig-veda, that they encountered hardly less resolute opponents.³ Centuries passed in the desperate conflict before the northern invaders had made their way from the Indus to the lower Ganges. During this time vast numbers of the conquered people had been incorporated with the conquering race, either as an inferior caste, or as wives and servants in the families of the ruling classes.⁴ It seems highly probable that the mass of the people of North India, while adopting some form of Aryan speech, remained in great part of Dravidian blood. Such was the opinion of Latham.⁵ What is of more importance is the evidence from many sources that at the time of the conquest the Dravidians were more enlightened than their conquerors. They were a race of industrious cultivators, mechanics, and mariners. The rude Aryan cattle-herders learned from them the habits of settled and civilised life, and the mingled races entered upon a career of splendid achievements in arts and literature which neither of them could have compassed alone,

The Dravidian languages themselves, though certainly inferior in some respects to the Aryan, do not lack their peculiar excellences,

¹ "Modern India and Indians." By Monier Williams; 2nd. edit., pp. 127-8.

² See especially Schrader's "Sprachvergleichung und Urgeschichte," the second edition, admirably translated (with the author's additions), by F. B. Jevons, under the more appropriate title of "Prehistoric Antiquities of the Aryan Peoples."

³ Jevons's "Schrader," p. 111.

⁴ Jevons's "Schrader," p. 112. De Quatrefages, "Les Pygmées," p. 84^e

⁵ See his "Natural History of the Varieties of Man," p. 545.

as Sir M. Williams has pointed out. A striking piece of evidence may be quoted from another high authority. Prof. Whitney writes of these languages: "The Dravidian tongues have some peculiar phonetic elements, are richly polysyllabic, of general agglutinative structure, *with prefixes only*, and very soft and harmonious in their utterance. They are of a very high type of agglutination, like the Finnish and Hungarian; and the author has been informed by an American who was born in Southern India and grew up to speak its language vernacularly along with his English, a man of high education and unusual gifts as a preacher and writer, that he esteemed the Tamil a finer language to think and speak in than any European tongue known to him."¹

Thus the Australians, whom some too eager theorists have accepted as the best representatives of primeval man, prove to be the offspring of one of the most highly endowed races of Southern Asia. Their present low condition—in which, however, the degradation is more apparent than real—is simply the result of hard surroundings, against which, in their situation, the greatest force of intellect could not successfully contend. Their history has exactly reversed that of the Tinnéh tribes. The latter, a naturally intelligent race, depressed in seeming stupidity in the frozen north, develop speedily in the sunny and fertile south into the quick-witted Hupas and Navajos. The intelligent and versatile Dravidian emigrants, scattered over the sterile plains of Australia, without domestic animals, and with no plants fit for cultivation, sink into a mental torpor almost, though not quite, as deep as that of the northern Tinnéh. In both cases the intellectual faculties, though held in restraint by the harsh environment, remain merely torpid and not seriously weakened, as is shown by the clear evidence of the languages which they speak, and by the remarkable proficiency evinced by some of their children at school, as already noted.²

¹ "The Life and Growth of Language," p. 244. The expression "with *prefixes only*" is doubtless a misprint. The Dravidian languages, like the Australian, are varied entirely by suffixed particles or terminational inflections. These, it may be added, are sometimes identical, or nearly so, in the two groups of languages. Thus, in the Dravidian Tulu, we have from *mara*, tree, the dative *maroku*, and from *naramani*, man, *naramanigu*; while in the Lake Macquarie and Wiradhurei dialects of the Australian we have from *biraban*, hawk, the dative *birabanko*, and from *bagai*, shell, *bagaiu*. So the plural suffix in Tamil is *gal*, and in Wiradhurei *galan*, to which in each language the case particle is added. In Tamil, *maram*, tree, has for its nominative plural *marangal*, and for its dative *marangalukku*; while in Wiradhurei, *bagai*, shell, makes in the nominative plural *bagaigalan*, and in the dative *bagaigalangu*. So closely do those widely separated languages accord, even in minute grammatical points.

² While the proof-sheets of this essay are under correction, *L'Anthropologie*, the valuable periodical of MM. Cartailiac, Hamy and Topinard, in its number for December, 1891, brings us an important piece of evidence, showing how promptly and strongly the natural intelligence of these members of the Dravidian stock manifests itself, with merely the advantages of good instruction and a settled life:—"There are few persons, even among those who deny all aptitude for intellectual progress to the black races, who are aware of the

There is, as has been stated, good reason for supposing that the southern Tinneh have not occupied their present abodes much more than seven hundred years, and some of them not more than five hundred years. It would be a matter of interest to determine, if possible, how long the Dravidian colonists have occupied Australia. There is always a disposition to imagine that the so-called aborigines who are found inhabiting any territory have possessed it from a very remote period. Less than fifty years ago the Polynesian islanders were supposed by some ethnologists of high rank, including an authority no less distinguished than Broca, to be the remnants of the population of a vast continent, which in some former geological era had sunk beneath the waters of the Pacific, leaving only its mountain tops and loftier plateaux, from Hawaii to New Zealand, to be the refuges of the few survivors of its population. It is now admitted on all hands, through the ample proofs furnished by tradition and language, that the islanders are the offspring of comparatively recent emigrations from the Malaisian archipelago, the earliest arrival from that quarter dating not much more than two thousand years back; and several of the islands, notably New Zealand and Easter Island, having been peopled within the last five hundred years.¹

Not much, perhaps, is to be learned from the legends of the wandering Australians. Yet their traditions seem to show that their ancestors entered the island by way of the Gulf of Carpentaria, and spread first southward along the eastern coast, and thence inland, along the rivers and across the arid plains, to the western coast. They found, it would seem, the country thinly occupied by a weak but cunning race of savages, who disappeared before them—doubtless in part exterminated and in part absorbed by the new population.² That these savages were of the negrito race, of whom a remnant survived in Tasmania, there can hardly be a doubt. How the Dravidian voyagers reached the Gulf of Carpentaria may be readily imagined. From the earliest times of which we have any knowledge, the pre-Aryan inhabitants of Hindostan, who were and still are bold navigators, were accustomed to visit the East Indian islands in considerable numbers. They were wont to limit their trading voyages to the nearer and more populous Malaisian

existence of a native settlement of Western Australians, called New Nursia, situated about seventy miles from the town of Perth, the capital of West Australia. This settlement, established in 1846 by two Spanish Benedictines, Fathers Serra and Salvado, comprises at present a convent, a church, a school, and a village of fifty cabins, occupied by native Christians, employed in agriculture and in various trades. One of the young girls educated in the settlement now holds an office in the postal and telegraph service of the West Australian Government. The boys develop well; they comprehend quickly what they are taught, and become good workmen, *as capable as the Whites*."

¹ See "Les Polynésiens et leurs Migrations," by A. de Quatrefages, and Peschel's "Races of Man," American edit. p. 349.

² A. W. Howitt, "Migrations of the Kurnai Ancestors," in the "Journal of the British Anthropological Institute" for May, 1886, p. 411; A. L. P. Cameron, in same Journal for May, 1885, p. 368.

islands.¹ But it may easily be understood that if any event, such as the Aryan invasion of India, had caused an unusually large emigration from that country, some of the more determined emigrants, seeking a new and scantily peopled region for settlement, might have pushed on eastward, through the straits dividing New Guinea from Australia, until they found a sufficiently inviting shelter in the harbours of the Carpentarian gulf.

The evidence of language seems to confirm this view. The similarity between the Dravidian and Australian languages, especially in their pronouns (which in some dialects of the two are almost identical), seems too great to allow us to suppose a longer separation of the two branches than that which has existed between the Asiatic and European Aryans. The fact that the entrance of the emigrants was, as Mr. Howitt sees reason to believe, by way of the northern gulf and down the eastern coast, seems to be shown by the circumstance that the languages of that coast retain most largely the complex Dravidian forms, which gradually lessen and become simpler as we go westward—precisely as the Polynesian grammar becomes simpler as we go farther from Malaisia, or as the grammar of the ancient Aryan languages is simplified as we advance from eastern to western Europe.

And here we return to a question of linguistics, which has been already noticed, but which requires, perhaps, a fuller discussion. When it was first discovered that the languages spoken by many barbarous tribes possessed a singular capacity for expression and a vast variety of forms for nicely discriminating the differences of objects and of ideas, an explanation was proposed which seemed plausible and was at first accepted by many reasoners. These elaborately constructed languages, it was suggested, indicated that the people who spoke them were the descendants of a more civilised race, and had simply retained their ancestral language while losing in other respects their ancestral culture. But further reflection and inquiry showed that this explanation could not be deemed satisfactory. If refinement of language is a product of culture, it was naturally asked, why should it not be lost with other like products? If conjugations and declensions, substantive verbs and abstract terms, are due to civilisation, like the smelting of metals, the weaving of cloth, the architectural and pictorial arts, why should these linguistic achievements be retained when all the other gains of high cultivation have been lost? How is it possible to suppose that the hundreds of barbarous tribes in America and Africa, while losing all other arts of an earlier civilisation, have preserved solely this beautiful mechanism of a highly organised speech?

These considerations led to a change of opinion—a change which

¹ See the facts relating to the Telugu or Telinga people, cited by Prof. van Rhyn in his learned article on the "Races and Languages of India," in the "American Encyclopædia," vol. ix, p. 215. "They are good farmers, and many of them were formerly seafaring men, undertaking long voyages. They held at one time large islands in the Eastern Archipelago."

resulted in two directly opposite views of the problem and its proper solution. One of these was proposed by an eminent Franco-American scholar, who was the first to study the complex American languages with philosophical acuteness, and to exhibit in a clear light their peculiar characteristics. The other, which will be first considered, has in later years been maintained by many writers, but by none with more force and eloquence than have been displayed by a distinguished English author, whose works in other departments have been justly admired and have delighted thousands of readers. In reference to the subject now under consideration, he states that he had formerly held the view that the rich and artistic structure of the languages of some barbarous nations implies an intellectual power superior to what we now find in these nations, and that they therefore prove a condition previously exalted. "Further explanation," adds Dr. Farrar, "has entirely removed this belief."¹ He is now of opinion that "this apparent wealth of synonyms and grammatical forms is chiefly due to the *hopeless poverty of the power of abstraction*, and is "the work of minds incapable of all subtle analyses." He adds: "Many of these vaunted languages (*e.g.*, the American and Polynesian)—these languages which have countless forms of conjugation, and separate words for the minutest shades of specific meaning—these holophrastic languages, with their "jewels fourteen syllables long" to express the commonest and most familiar objects—so far from proving a once elevated condition of the people who speak them, have not even yet arrived at the very simple abstraction required to express the verb "to be," which Condillac assumed to be the earliest of invented verbs!" We are further told by the same author in another work² that "a savage may have a dozen verbs for 'I am here,' 'I am well,' 'I am tall,' 'I am hungry,' &c., because he has no word for 'am,'—and a dozen words for 'my head,' 'your head,' 'his head,' and almost any conceivable person's head, because he finds a difficulty in realising the mere conception of any head apart from its owner." And we are assured that while these savages have an endless number of expressions for particular varieties of objects and actions, they have no general terms for a whole class of such objects or acts.

The account which has been given in the foregoing pages of the languages spoken by two races in the lowest stage of savagery will show how widely astray this ingenious and eloquent writer has been in his facts. Both Athabascans and Australians make abundant use of the substantive verb, and exhibit the power of abstraction in its fullest force. The savage Australian has no difficulty in distinguishing a head from its owner, and does it perhaps with more logical correctness of grammar than an Englishman. He employs the possessive pronoun in its genitive case like a possessive noun. *Walan* is head, and *kore* is man, the latter making in the

¹ "Chapters on Language," by the Rev. Frederic W. Farrar, D.D., F.R.S. chap. 4, p. 45, American edit.

² "Families of Speech," Lecture iv, p. 400.

genitive *korekoba*, man's; *emmoemba* is the genitive of the first personal pronoun; so we have *walan korekoba*, man's head (head of man), *walan emmoemba*, my head (head of me). Could the most analytic of "civilised tongues" do better than this?

It is observable that in all the objections which are made, all barbarous tribes are confounded together, whereas they differ very widely in their intellectual qualities, and in the languages which manifest these qualities. One of the passages just quoted brackets together the American and Polynesian languages, which are at the very opposite poles in their lexical and grammatical characteristics. The Polynesian is among the simplest and least wordy of languages. It has, properly speaking, no inflections, and makes little use of "agglutination." The words are brief, usually of only two or three syllables. Its grammar is carried to almost the last degree of analysis—the mark, as we are assured by some writers, of high civilisation and intellectual superiority. All the cases of nouns and all the moods and tenses of verbs are indicated by separate particles. *Fale*, is house; *te fale*, the house; *o te fale*, of the house; *ki te fale*, to the house. The plural is also indicated by a particle,—*na fale*, the houses. The Polynesian cannot, like the Iroquoian, combine the personal pronoun with the noun; he must say *lau ulu*, my head; *nau ulu*, thy head; *ana ulu*, his head; *te ulu o te tanata*, the head of the man. He has two particles which represent the substantive verb. There is no lack of general terms. Besides a name for each kind of fish and tree, there are generic words for fish (*ika*) and tree (*lakau*). Yet this simplest and most analytic of idioms is really a very poor one, with feeble powers of expression; and the people, when first known to Europeans, were still in a low stratum of barbarism, ignorant even of pottery or the use of the bow.

The truth is that not simplicity but complexity is the evidence alike of progress and of the energies which lead to progress. The simplest forms of animal life are the lowest, the most complex are the highest. Among inventions, compare the sickle with the reaping machine, the canoe with the steamship. The simplest of governments is the lowest, the patriarchal despotism; the two most complex of all actual governments are probably those of the British Empire and the North American Federation, which are surely among the highest. The complexity of the American and Australian languages, rightly regarded, is the evidence, not of poverty of the powers of abstraction and analysis, but of the very reverse. I have had occasion to give elsewhere an account of an American people, the Iroquois, who, though possessing no greater natural advantages than the Polynesians, had reached a much higher plane in the arts, as well as in their social and political organisation. Their language, in its elaborate structure, corresponds to this superiority, and accounts for it. As an instance of that complexity, which some scholars, like the esteemed author just now quoted, have too hastily condemned in these languages—while they doubtless admire it in the Sanskrit, the Greek, and the

German.—I may venture to quote the analysis of a word which fairly indicates the system and quality of this speech, and the inferences that may reasonably be drawn from it:¹

"The word *teskenonhweronne*, which is rendered, 'I come again to greet and thank,' is a good example of the comprehensive force of the Iroquois tongue. Its root is *nonhwe* or *nonue*, which is found in *kenonhwe*, 'I love, like, am pleased with,'—the initial syllable *ke* being the first personal pronoun. In the 'frequentative form' this verb becomes *kenonhweron*, which has the meaning of 'I salute and thank,' i.e., I manifest by repeated acts my liking or gratification. The *s* prefixed to this word is the sign of the 'reiterative form,' *skenonhweron*, 'again I greet and thank.' The terminal syllable *ne* and the prefixed *te* are respectively the signs of the 'motional' and the 'cislocative' forms,—'*I come hither again to greet and thank.*' A word of six syllables, easily pronounced (and in the Onondaga dialect reduced to five), expresses fully and forcibly the meaning for which eight not very euphonious English words are required. The notion that the existence of these comprehensive words in an Indian language, or any other, is an evidence of deficiency in analytic power, is a fallacy which was long ago exposed by the clear and penetrative reasoning of Duponceau, the true father of American philology. As he has well explained, analysis must precede synthesis. In fact, the power of what may be termed analytic synthesis—the mental power which first resolves words and things into their elements, and then puts them together in new forms—is a creative or co-ordinating force, indicative of a higher natural capacity than that of mere analysis. The genius which framed the word *teskenonhweronne* is the same that, working with other elements, produced the steam engine and the telephone."

The name of Duponceau recalls us to the special point of discussion—the true explanation of the origin of this remarkable wealth of forms and these evidences of discriminating power, which are found in many languages spoken by barbarous tribes. This eminent writer, distinguished alike as a scholar and a man of affairs, was (as has been said) the first to make a profound and philosophical study of the American languages and to compare them with other idioms in such a manner as to disclose the true principles of the science of comparative philology. Born in France in 1760, his talents and learning had secured him, at the early age of seventeen, the position of secretary to the well-known Court de Gébélín, author of many important works on philosophy, religion, and language. From this position he passed to that of secretary and aide-de-camp to Baron Steuben, and repaired with him to America, where, after the war of independence, he held an important office under the Federal Government. Admitted to the bar, he became so eminent in his new profession that he was offered

¹ "The Iroquois Book of Rites," in Brinton's "Library of American Aboriginal Literature," p. 149.

the dignity of Chief Justice of Louisiana. In later life he returned ardently to scientific pursuits, became President of the American Philosophical Society of Philadelphia, and devoted himself especially to the study of the aboriginal languages. His best-known work on this subject is his "Memoir on the Grammatical System of certain Indian Nations of North America," which, written in French, was presented to the French Institute in 1835, and received the "Volney prize" for linguistic science. This memoir, which has been justly styled by an eminent and certainly not partial critic, "a most valuable and brilliant work,"¹ had been preceded by others less known, and particularly by a translation of Zeisberger's "Grammar of the Language of the Lenni Lenape, or Delaware Indians." To this translation, published by the American Philosophical Society in 1827, the translator prefixed a preface of considerable length, in which his view of the scope and principles of comparative philology is set forth, and is illustrated by many examples and much clear and powerful reasoning. Some passages of this essay which refer to our present subject may be cited. After referring to the great variety in the structure of languages, he remarks:

"It has been shown that the American languages are rich in words and regular in their forms, and that they do not yield in those respects to any other idiom. These facts have attracted the attention of the learned in Europe, as well as in this country; but they have not been able entirely to remove the prejudices that have been so long entertained against the languages of savage nations. The pride of civilisation is reluctant to admit facts like these in their utmost extent, because they show how little philosophy and science have to do with the formation of language. A vague idea still prevails that the idioms of barbarous tribes must be greatly inferior to those of civilised nations; and reasons are industriously sought for to prove that inferiority, not only in point of cultivation, which would readily be admitted, but also to show that their organisation is comparatively imperfect. Thus a learned member of the Berlin Academy of Sciences, in an ingenious and profound dissertation on the forms of languages [Baron William von Humboldt—"On the Origin of Grammatical Forms, and their Influence on the Development of Ideas"], while he admits that those of the American Indians are rich, methodical, and artificial in their structure, yet will not allow them to possess what he calls genuine grammatical forms (*ächte Formen*), because, he says, their words are not inflected, like those of the Greek, Latin, and Sanskrit, but are formed by a different process, which he calls 'agglutination;' and on that supposition he assigns to them an inferior rank in the scale of languages, considered in the point of view of their capacity to aid the development of ideas. That such prejudices should exist among men who have deservedly acquired an eminent reputation for science is much to be regretted

¹ Farrar: "Chapters on Language," chap. 4, p. 44, footnote.

and it is particularly with a view to remove them from the minds of such men that this Grammar is published. The learned Baron will, I hope, recognise in the conjugations of the Delaware verbs those inflected forms which he justly admires, and he will find that the process which he is pleased to call agglutinative is not the only one which our Indians employ in the combination of their ideas and the formation of their words."

After citing some striking examples of these modes of word-formation and inflection, the author comes to the point now under discussion. He remarks that in view of the considerable degree of art and method which have presided over the formation of the American languages, the question arises whether we are to suppose (as many had been inclined to believe) that this continent was formerly inhabited by a civilised race, or whether, on the other hand, it is not more reasonable to hold that men are "endowed with a natural logic which leads them, as it were by instinct, to such methods in the formation of their idioms as are best calculated to facilitate their use." He does not hesitate to decide in favour of the latter view, because, as he affirms, "no language has yet been discovered, among either savage or polished nations, which was not governed by rules and principles which nature alone could dictate, and human science never could have imagined." "No language," he adds, "can be called 'barbarous' in the sense which presumption has affixed to that word." Culture stands for something, but for comparatively little. The question of the respective shares to be assigned to nature and to cultivation in the composition of such noble instruments as the languages of men is one well worthy of being thoroughly investigated. "The result, it is true, will be mortifying to our pride; but this pride, which makes us ascribe so much to our own efforts and so little to the silent operations of nature, is the greatest obstacle that we meet in our road to knowledge."

The result, therefore, of our inquiries—a result deduced alike from the evidence of language and that of history—is that a state of barbarism does not imply any inferiority in intellectual power. It simply indicates that the barbarous people have been compelled to live amid surroundings which rendered any advancement in culture impossible. Remove the savage Athabascans to the bountiful pastures and fertile valleys of New Mexico, give them horses, cattle, and sheep to tend, and wheat, and fruits, and edible roots to cultivate, and presently their torpid faculties rebloom, and they become the quick-witted and inventive Navajos. Remove the shrewd, industrious, enterprising, improving Dravidians to the barren plains of Australia, and they sink in time to what has been deemed the lowest level of humanity.

This naturally leads us to consider some of the theories which have lately been put forth in regard to the condition and character of primitive man. Strange to say, the modern representatives of this unknown individual have been looked for in places where, by the common consent of all physiologists, he could not possibly have

come into being—in Australia, in South Africa, in the Pacific Islands, and in America. Many works have been put forth in which speculations, based entirely on what has been learned of the inhabitants of these regions (but generally in utter disregard of the teachings of linguistic science), have represented the earliest men as sunk in the lowest debasement of mind and morals. In this “primitive horde,” as it has been styled, human beings have been described as herding together like cattle, utterly without family ties, and living in what is euphemistically termed “communal marriage,” or, in other words, in promiscuous intercourse. From this dismal condition, we are assured, they have slowly and gradually emerged, by long and painful struggles, of which the stages and methods have been ingeniously suggested, and the indications pointed out as surviving in various customs and institutions, such as wife-capture, mother-right, father-right, endogamy, exogamy, totemism, the clan-system, and others of like character. There is no doubt that all these customs or social conditions have prevailed among barbarous races, except only that of promiscuous intercourse, which, as Darwin has clearly shown, is contrary to the very nature of man as a “pairing animal,” and never could have existed.¹ All of them are doubtless well worthy of careful investigation. But if the conclusions drawn from the facts recorded in the previous pages of this essay are correct, all these peculiar usages of barbarous tribes are simply the efforts of men pressed down by hard conditions below their natural stage to keep themselves from sinking lower, and to preserve as far as possible the higher level of intellectual, moral, and social life to which their innate faculties tended to exalt them. They are like the struggles of a bird in a cage to keep its wings in use for flight. A child who should assume that the primitive canary could only flutter for a distance of a few yards would be as wise in its inference as the philosopher who regards the Australians and Fuegians as representatives of primitive man. The physiologist sees at a glance in the structure of the bird’s wings the kind of flight for which it was intended, and the philologist discerns in the Australian and Fuegian languages evidences of the mental endowments which, under other circumstances, would have placed the speakers of those idioms very far above their actual condition.

It may be well to attempt to gather from the evidence in our possession what was the real condition and character of primeval man. We possess in three important works, lately given to the world by three authorities of the first rank, the latest conclusions of science on the question of the probable birthplace of the human species. It is of interest to observe that these eminent authorities differ widely on certain important questions—M. de Quatrefages

¹ On this subject the admirable work of Mr. Edward Westermarck, of the University of Finland, “*The History of Human Marriage*” (published since this essay was written) should be consulted.

being a strenuous opponent of the Darwinian theory, of which Dr. Brinton is a no less decided supporter, while Mr. Wallace occupies, at least as regards the mental endowments of man, an intermediate position. Yet their opinions on the question under consideration are in close accord. All agree in holding that the human race is of much greater antiquity than was formerly supposed, going back at least into the early quaternary period. All are of opinion that the varieties, or "sub-species," which make up this race, are of one stock, which had its origin in a single locality, and all find this locality in the temperate zone of the eastern continent. They differ as to the precise position, but the differences are not very wide, and are easily reconciled. Finally all accord in placing the earliest men in a region and climate where their natural powers would have the fullest expansion, and their surroundings would be most favourable for the development of every faculty—where animals apt for domestication and plants suited for cultivation would be ready at hand. M. de Quatrefages would find the cradle of the human race in Asia, not far from the great central pile (*massif*) of the continent, and near the region which gives birth to all the great streams which flow to the north, the east, and the south.¹ Mr. Wallace, in like manner, finds this birthplace in the "enormous plateaux of the great Euro-Asiatic continent, extending from Persia right across Thibet and Siberia to Manchuria, an area, some part or other of which probably offered suitable conditions, in late Miocene or early Pliocene times, for the development of ancestral man."² Dr. Brinton, for reasons which he sets forth with much force of argument, is inclined to look for the cradle of the species further westward, near the Atlantic in north-western Africa.³

These varying opinions may be reconciled in the same manner in which Dr. Schrader has sought, not without success, to conciliate, or rather to combine, the views of those archæologists who hold that the Aryan race had its primal home or place of development in Central Asia, near the Oxus, with the opinions of those who find this home in central or eastern Europe, near the Danube. He holds that these localities were secondary centres, formed after the migration of the earlier members of the race eastward and westward, from their primitive home on the middle Volga.⁴ In like manner it may be suggested that central Asia and north-western Africa were secondary centres, to which the earliest population overflowed from its primal seat in some intermediate position. This primal home of the species seems to be strongly indicated by historical and linguistic facts. The vast peninsula of Arabia, whose protecting deserts enclose fertile oases, some of them large enough to be the seats of powerful kingdoms, lies midway between the two regions, Egypt and Mesopotamia, in

¹ "Introduction à l'Étude des Races Humaines," p. 132 (1887).

² "Darwinism," p. 460 (1889).

³ "Races and Peoples," p. 82 (1890).

⁴ "Prehistoric Antiquities of the Aryan Peoples," part iv, chap. 14.

which the human race displayed in the earliest historical times its capacity for the highest culture. Their civilisation goes back certainly to a date five thousand years before the Christian era, and probably to a long anterior period. The latest inquiries have led to the opinion that this civilisation may have had its beginning in the quaternary or even in the pliocene era.¹ In fact, it is doubtful whether Egypt was ever occupied by a barbarous people. That its earliest inhabitants used implements of chipped stone, and were unacquainted with the metals, seems to be established. But it should be borne in mind that civilisation does not depend upon a knowledge of the metals. It begins as soon as men have acquired a settled habitation, and have learned to tame the useful animals and to cultivate the useful plants. If the earliest men of the existing species possessed, as we have every reason to believe, intellectual faculties equal to those of their descendants, how long would they be in acquiring these first elements of civilisation? Imagine the first human beings to be dwellers in a fruitful oasis of northern Arabia, and consider what must necessarily have been their social condition. Being human (to repeat a former remark), they must have spoken to one another in articulate language; and, moreover, we know from the laws of linguistic science that this language must not only have been a completely organised speech, but that it was more complex in its forms than any dialect which has been derived from it. If, for example, it was, as would seem probable from the supposed locality, a language of the Hamito-Semitic stock, it certainly did not belong to the group of Hamitic tongues, which are as much simpler in their forms, and therefore younger, than those of the Semitic group, as are the languages of Polynesia compared with the ancestral Malasian tongues, or as is the English language compared with the German.

If the first human beings had all the natural instincts of their species, they belonged to the class of pairing animals. Their first social organisation was that of the family. The first government was neither patriarchal nor matriarchal, but parental. The woman in her own sphere, and in her special prerogatives, was equal to the man. They were mutual helpmates. And in the first development of the arts of civilisation it is probable that the woman took the leading part. This part has been vividly suggested by an ingenious French writer in a passage which well deserves to be quoted:—"It is to woman, I think," writes M. Elie Reclus, "that mankind owes all that has made us men. Burdened with the children and the baggage, she erected a permanent cover to shelter the little family. The nest for her brood was perhaps a hollow, carpeted with moss. By the side of it she set up a pole with large leaves laid across, and when she thought of fastening three or four of these poles together by their tops the hut was

¹ See Brinton (quoting G. de Lapouge) in "Races and Peoples," p. 129. Wallace, in "Darwinism," p. 460.

invented—the hut, the first ‘home.’ She placed there the kindled brand, with which she never parts, and the hut became illuminated; the hut was warmed; the hut sheltered a hearth.” “A day comes when by the side of a doe which the man has slain, the woman sees a fawn. It looks at her with pleading eyes. She has compassion on it, and carries it away in her arms. The little creature becomes attached to her and follows her everywhere. Thus it was that women reared and tamed animals, and became the mother of pastoral peoples. And that is not all. While the husband devoted himself to the greater game, the woman, engaged with her little ones, collected eggs, insects, seeds, and roots. Of these seeds she made a store in her hut; a few that she let fall germinated close by, ripened, and bore fruit. On seeing this she sowed others, and became the mother of agricultural peoples. In fact among all uncivilised men cultivation may be traced to the housewife. Notwithstanding the doctrine which holds sway, I maintain that woman was the creator of the primordial elements of civilisation.”¹

These happy suggestions of M. Reclus call for certain qualifications. The author does no more than justice to woman, but he does less than justice to man. He forgets certain primary impulses, as strong in man as in woman, though different. If the nest-making impulse, so to speak, is most powerful in her, the building instinct is strongest in him. As soon as she began to rear a shelter for her brood, the mechanical faculty would be aroused in him. The first cabin, like the first swallow’s nest, would be the joint work of the first mated pair. If woman tamed the first gentle animal as a pet, man would discern its usefulness for food and clothing, and become the first herdsman. If woman sowed the first seeds, man fenced the field, and became the first agriculturist. This mutual aid, which is theory as regards the past, is fact at the present day among the Navajos and the Melanesians,² and the fact confirms the theory.

Granting an intelligent people, dwelling in a fruitful region, under a climate genial in summer, but rigorous enough in winter to make shelter and clothing necessary and the storage of food desirable—with useful animals and plants near at hand—how long a period would be needed for the arts essential to civilisation to be invented and practised by them? Among some American nations, according to their traditions, less than five centuries seems to have sufficed, even with a scanty stock of such animals and plants. In five centuries the offspring of a single pair on an Arabian oasis, doubling in number only four times in a century, would have grown to a people of five hundred thousand souls, numerous enough to send out emigrations to the nearest inviting lands,—to

¹ “Primitive Folk: Studies in Comparative Ethnology.” By Elie Reclus (in the “Contemporary Science Series”), p. 58.

² See the excellent work of the Rev. Dr. Codrington, “The Melanesians, their Anthropology and Folk-Lore.” He tells us (p. 304), that “the respective shares of men and women in garden work are settled by local custom.”

the valleys of the Nile and the Euphrates. But these would have been bands of civilised men and women, familiar with agriculture, the rearing of domestic animals, housebuilding, weaving, and other arts of settled and regular life. We cannot imagine among them the barbarous usages and laws of wife-capture, exogamy, slavery, caste, and other like institutions, which have grown up in later ages among their debased descendants, who have wandered or been thrust into wilder regions, and have had to struggle with harder conditions. These luckless communities should be styled, not "primitive peoples," but "degenerate peoples." Yet in their languages, and indeed in the purposes underlying many of the very customs which are cited as proofs of their original and innate savagery, may be discerned, when rightly analysed, evidences of the survival of those intellectual endowments which were displayed by their forefathers in the primeval civilisations of Arabia, North Africa, and Central Asia.

We return to the thesis with which our essay commenced. Unless it can be clearly shown that man is separated from other animals by a line as distinct as that which separates a tree from a stone or a stone from a star, there can be no proper science of anthropology. Geologists will readily admit that a stone is composed of star-dust, but they will say that it is star-dust which has assumed a form totally distinct from its original elementary condition. A treatise composed of facts and speculations showing how the matter of the earth was probably derived from star-dust would doubtless be very interesting to geologists, but it would not be deemed by them a treatise on geology. Geology commences where star-dust ends and the stone begins. A treatise which should undertake to show how inanimate matter became a plant or an animal would, of course, possess great interest for biologists; but it would not be accepted by them as a treatise on biology. That science begins when life appears. A work showing the chemical constituents of every species of plant would certainly be a valuable work; but it would be a work of chemistry, and not of botany. In like manner, a work displaying the anatomy of man in comparison with that of other animals cannot but be of great value; and a treatise showing how the human frame was probably developed from that of a lower animal must be of extreme interest; but these would be works, not of anthropology, but of physiology or biology. Anthropology begins where mere brute life gives way to something widely different and indefinitely higher. It begins with that endowment which characterises man, and distinguishes him from all other creatures. The real basis of the science is found in articulate speech, with all that this indicates and embodies. Solely by their languages can the tribes of men be scientifically classified, their affiliations discovered, and their mental qualities discerned. These premises compel us to the logical conclusion that linguistic anthropology is the only true "science of man."

Slavonic Folk-tales about the Sacrifice of one's own Children.

By MIKHAIL DRAGOMANOV.¹ Translated by OLIVER WARDEOP.

THE "Journal of the Bulgarian Ministry of Public Instruction" is a periodical of which any country might well be proud. Students in every branch of science will find in these handsome volumes a rich storehouse of new materials, collected and arranged by able hands; but it is to those who are interested in popular literature, superstitions and the like, that they especially appeal. Unfortunately, the language forms a serious difficulty; the best dictionary in existence, that of Bogorov,² is detestable, and we look forward with the greatest impatience to the completion of another by Mr. I. P. Slaveikov (late of Robert College), who is sure to produce something of lasting value. In spite of this lack of a good lexicon, we have succeeded in interpreting the text before us with the help of various glossaries,³ and we begin by offering to our readers the substance of an article by Professor Dragomanov, whose name is sufficiently respected among folk-lorists to gain for us their attention. Our aim is merely to give in English a summary of the learned gentleman's monograph.

In "a few introductory remarks" we have a masterly sketch of the early history and true character of popular (or rather oral) literature, beginning with Macpherson, Percy, Herder, the Brothers Grimm, and an explanation of the manner in which this literature is at once international and yet thoroughly national. Lack of space alone prevents us from translating in full these three pages. We, therefore, proceed at once to the particular question which forms the subject of the essay.

The numerous Slavonic stories which relate to the sacrifice of children by their parents may be arranged in the following groups:—

I. The Little Russian legend about King Paparim; the Great Russian ballad of "The Merciful Woman," with its heretical variants.

II. The legend from Ukraine about "The Brothers who were made rich by God in the guise of a traveller"; analogous Bulgarian legends; the Serbian ballad about "The merciful deacon and his wife"; (the Breton legends of St. Tonina and the shepherdess who was made rich).

¹ "Slavyanskite skazaniya za pozhertvuvanie sobstvenno diete," ot Mikh. Dragomanov. Published in "Sbornik za narodni umotvoreniya, nauka i knizhina." Kniga i, Sofiya, 1889, pp. 65-96.

² Bogorov: "Blgarsko-Frenski Riechnik." Vienna, 1871.

³ Especially that which is appended to M. Dozon's "Chansons Bulgares." Paris, 1875.

III. The ecclesiastical Slavonic story of "The Christ-loving merchant"; (the Georgian tale of "The kind merchant"; an episode from the French poem of *Amis et Amyles*).

I. KING PAPARIM.¹

"When Jesus Christ was born, King Herod, desiring to slay him, sought the Virgin Mary. One day, the Mother of God, pursued by Herod, ran into a house where there was a woman who had lying in the cradle a child of the same age as Jesus Christ. The Virgin Mary seized the child, threw it into the burning stove, and put her own Son in its place, telling the woman to have no fear for her son, because he would live again; if Herod asked whose baby that was in the cradle, she must say it was her own; the Virgin then hid herself. Herod came in and asked the housewife whether she had not seen a woman with a suckling. The good woman replied that she had seen nobody, and when interrogated about the child in the cradle answered as she had been ordered. When Herod had gone away, the Blessed Virgin took the woman's baby out of the stove; it was alive, and not burnt in the least. When it grew up it was called King Paparim. King Paparim is still alive at the present day; he lives on Mount Zion, and when the moon is new he is young, when the moon grows old he too becomes old, his hair is white as milk. King Paparim finds out from God the price of corn and cattle, and informs mankind. As long as men were righteous he used to find out this every three days, but nowadays people are wicked, so he only finds it out every six days."

Paparim is evidently the Pope of Rome, about whom we have many other Little Russian traditions.² We are told that he never dies, and that he has existed from the beginning of the world. Books fall down from heaven for him, formerly one every day, but now only one in the year. This version comes from the right bank of the Dniepr, where the Orthodox natives of the borderland have had much intercourse with Catholics. It is possible that in an earlier and fuller form of the legend the child who had taken Christ's place was asserted to have afterwards become Pope; while the reference to the moon, in the Kupyansk story, seem to point to some pagan legend which had become fused with a Christian tradition.

*The Merciful Woman.*³—There are numerous variants of this Great Russian story. In three of them the Virgin carries Christ in her arms to save him from the Jews; she appeals to the Merciful Woman to throw her own child into the fire, and nurse Christ instead. In all the other versions the baby Christ runs

¹ Published in "Kharkovskii sbornik," 1888. The story was obtained from the district of Kupyansk.

² M. Dragomanov: "Malorussekiya narodnyya predaniya," p. 146.

³ Bezsonov: "Kalyeki perekhozhie," iv, pp. 117-42.

alone to the Merciful Woman, and promises a reward for her obedience to his commands.

Kind-hearted woman, merciful woman !
 Throw thy son into the flaming stove,
 Take up Christ in thine arms,
 And thou shalt inherit the Kingdom of Heaven.

The Merciful Woman does as she is told, and when the Jews arrive, she shows them her child in the fire, and tells them that it is Christ. The Jews go away rejoicing, after having closed the stove. Then Christ orders the woman to open the stove.

Grass had grown up in the stove,
 Flowers bloomed among the grass,
 The baby plays among the flowers,
 His head girt with a halo shining in the sunlight,
 He reads the Gospel-book,
 Extols the power of Heaven,
 And, with angels and cherubs
 And all the host of heaven,
 Prays to God for his father and mother
 And for all the Orthodox world.

The child does not come to life, but goes straight to Paradise.

In many versions of this ballad the heroine is called the *Hallelujah woman* (Allilueva zhena), and some heretical sects (self-burners, &c.) have added a passage in which Christ is represented as authorising their detestable practices.

Oh ! thou Merciful Hallelujah Woman,
 Make known my will to all my folk,
 To all right believing Christians,
 Let them throw themselves into the fire for my sake.
 Let them throw in sinless babes,
 And all suffer for the name of Christ,
 Nor yield to the wiles of the ravening wolf,
 The ravening wolf, wicked Antichrist.
 For Antichrist has gained great power,
 He is destroying the Christian faith throughout the world,
 He is establishing his wicked church.
 He orders all to shave their beards,
 And to use three fingers in crossing themselves,
 He wishes to root out my Christian faith.¹

II. THE THREE BROTHERS AND GOD.²

Once upon a time there were three brothers who had neither father nor mother. The three set out together to seek work, and, as they walked, they wished that God would send them a good

¹ Varentsov: "Sbornik Russkikh dukhovnykh stikhov," p. 176. Cases of self-destruction (sometimes of whole villages) are by no means rare at the present day. In 1870, in the government of Perm, Anna Kiyukina being charged with burning her son to death, in the manner recommended above, quoted this ballad in court to justify her action.

² Chubinskii: "Trudy ekspeditsii v Y.-Z. krai," t. ii, pp. 355-357. The story comes from the government of Kiev, district of Kaney.

master. An old man met them and said, "Whither are you going, my sons?" They answered, "We are going to look for work." "Stop then," said he, "and I will be a father to you. When you grow up I shall find wives for you, and you shall have houses and lands, but you must not forget God."

The brothers agreed. They all went on and on together till they came to a beautiful house, out of which there came a pretty girl, as fair as a flower. The eldest brother said, "I should like to have that girl for my wife, and to have oxen and cows." "Very well," said the old man, "let us go and seek her; and you shall have oxen and cows, but do not forget God as long as you live."

They entered the house, asked the hand of the maiden, and had a wedding feast; after this the two remaining brothers and the old man went on again. They travelled and travelled till they saw a house, and out of the house came a maiden as lovely as a dewdrop. The second brother said, "I should like to marry that maiden, and to have a mill and a fish pond, to grind corn and have bread for ever." The old man satisfied all his wishes, and told him not to forget God. The youngest brother was then wedded and settled, and promised the old man that he would not forget God, but would succour the needy.

Now the old man was the Lord. After wandering about the world for a long time, he thought he would go back and see how the young men were fulfilling their promises. He went first to the eldest, and begged an alms. "Now see here," said the youth, "you are not so very old yet. You are still able to earn your bread. I have not had time to get on my feet yet." But he was very wealthy, and had great ricks, barns, cattle, and chests full of clothes. The old man had gone but a gunshot from the house when he looked back, and saw all the man's property being burnt. He then went on to the second brother, who had the fish pond and mill near his house, and, entering the mill, said, "For the love of Christ, good man, give me a handful of flour." "I will not," was the reply, "I have not ground enough for my children yet." The Lord went on, and on looking back saw the mill in flames. He then visited the youngest son, at whose house he arrived in a miserable plight; vermin swarmed upon him like ants. "Give me," said he, "for Christ's sake, some of the store that God has bestowed upon you." "Go into the house, old man, and there you shall have your needs satisfied." The good wife, who was indoors, no sooner saw the woeful state he was in, than she opened a trunk and took out a shirt and trousers for him. He put them on, but insects still covered him like swarms of ants. "What can I do," said the woman, "to free you from this filthy pest?" "How can I be made whole? If you take that boy who is sitting on the bench and throw him into the stove, and cook him, and let me smear myself with the balm from his body, it will drive away the vermin, otherwise I shall die in two days, for they will eat me up." "Wait, grandfather, till I go and ask my husband's advice." The

husband, who was at work, on being consulted by his wife, replied that the life of a grown man was of more value than that of a little child. Accordingly she returned to the house, put her child in the stove, and heaped up fire-brands on the top, so that he should not get out. When she looked in, the child was sitting amid the flames *playing with gold coins* (lit., *yellow things*). The old man said, "The Lord has given you this, my children, because you do not forget the needy; but your brothers have been burnt up with all their wealth and their cattle." The old man disappeared before the wife had time to call her husband.

*A similar story from Bulgaria.*¹—Once in the olden time when the Lord used to go about the world, there were three brothers. One day they were travelling sorrowfully to a strange land when they saw by the roadside a spring of water, and stopped to quench their thirst. "Ah!" said the eldest brother, "if the Lord would only make that spring run wine instead of water, I would build a tavern there, and give wine free of charge to every wayfarer who asked for it."

Now the Lord was there and heard him, and the spring was at once turned into wine. So the eldest brother stayed there, built a tavern, and for some time gave wine to all who asked. But after a while he grew stingy, and would not give a drop of wine to anybody unless they paid. The other two brothers went on and looked for work. One day they saw a mountain, and upon it a plain where flocks of ravens and crows had settled. The second brother said, "Ah! if the Lord would only turn these birds into sheep, I would build a sheepfold, and give milk to all who asked for it." No sooner had he spoken than his wish was fulfilled, and for a time he did as he had promised; but he, too, soon became stingy, and would not give a spoonful away without payment.

The youngest brother continued his journey alone, and at last reached a town where he took service with an innkeeper, and stayed with him a long time. When his master saw his goodness and obedience, he gave him his daughter to wife, and the couple lived happily together, for both were kind and good-hearted. Now the Lord, wishing to try the faith of the three brothers, disguised himself as an old man, and went first to him who had the fountain of wine. He took a dry crust of bread, and said, "Son, give me a cup of wine to moisten this dry bread, for I am old, and have no teeth to chew it." "Get you gone," was the reply; "if I were to give to every passer-by, I should have nothing left." "But, my son, if you give to no other man, give to me, for I have no teeth to chew my dry bread; and, besides, you did not buy that wine, the Lord gave it to you." "I cannot give you any, old man; begone!"

The Lord went on, but as soon as he had gone a little way the spring was turned into water again. The same thing happened to the second brother.

¹ K. A. Shapkarev: "Sbornik ot narodni starini," t. iii, Plovdiv, 1885, pp. 18-22.

Last of all the Lord went to the youngest, disguised as an old man covered with wounds and sores on his hands and legs and face, exceedingly offensive to the sight. It was evening, and, when he knocked, the wife came to the door. "What do you want, grandfather?" said she. "May I stay here for the night with you? It is dark; I have no house to go to, and I am ill; let me lie behind your door." The woman took pity on the miserable old man, and made him go upstairs and warm himself. Her husband having come home, they asked the old man how he had got into such a condition, and whether there was no remedy. He answered that a leech had told him of one thing of which if he ate a little he would be cured; but it could not be bought for money. After much pressing, he informed them that he could be healed by eating of the flesh of a little boy, the only child of his parents. The husband and wife decided to kill their child, "We are young, and the Lord will give us other children." In spite of the old man's entreaties they kill their son, put him in a pot, and cook him in the oven. The wife sends her husband to see if the child is properly cooked. While bringing the pot back to the house from the kitchen, the man takes off the lid, and sees the boy's eyes turned upon him, but he thinks he is dead. The dish is set before the old man, who eats a little of it and becomes perfectly healthy. The child comes to life after being blessed by the old man, who then disappears, and they know that he is the Lord. The Lord left his blessing in that house, and the family from generation to generation have seen no evil thing, and have obtained the Kingdom of Heaven.

A second Bulgarian version, entitled, "Bulgarian Hospitality,"¹ the Lord is going about trying people's faith, and, in the guise of an old man, has come to the door of a poor Bulgarian, who invites him to come in and share "all that God has given." The old man will not partake of their supper, but when the hostess goes to attend to a child who begins to cry in another room, he thus addresses her husband,

"Listen to this, good man. You wish to entertain me; but I cannot eat anything excepting human flesh. Kill your little boy; wash him well and cook him in the stove, taking care not to let your wife see you, for she would be grieved."

"Is that all you want, old man? Why did you not tell me sooner, for I would not have a hungry guest in my house? Did you not say that all God has given us is yours? You shall see directly what I would do for you; wait a little till I prepare what you want."

The child was accordingly put in the stove, which seems to have been in an out-house. When the father opened the stove to see if the child was cooked, he was dazzled by a flood of light. The victim, and the copper basin in which he had been placed, were golden, and shone like the sun. The child sat in the basin,

¹ Erben: "Sto Slavyanskikh narodnykh skazok." Praha, 1865, pp. 207-209, and Shapkarev: *op. cit.*, 22-24.

healthy and merry; on his head was a crown of pearls and priceless jewels, at his girdle was a sword, in his right hand he held a book with golden letters, in his left hand was a wheat-sheaf with full ears, and all shone with a fiery brightness like gold.

The father returned to the house to tell the old man about the miracle which had taken place, but the guest had departed, leaving a blessing upon his hosts and their descendants.

*The Two Orphan Brothers and the Lord*¹ is a third Bulgarian version of the story. It begins in a similar manner to the story about the three brothers; but at the marriage of the second a miracle takes place. The old man and his companion are spending the night at a house where there is a beautiful maiden, and the former says to the hostess, "If the vine which is in the courtyard bears grapes in the morning, will you give your daughter to my friend?"

Serbian Versions.²—These differ from the Little Russian and Bulgarian, and, probably owing to Bogomilian influence, lay great stress on the value of morality as opposed to ceremonial religion. In one of them *Deacon Stefan* is engaged in sowing corn in the early dawn of Sunday, before the mass, and is reproached for impiety by two old men who pass along the road. He replies that he has in his house nine blind men and nine dumb, whom he is supporting by his labours, and that God will pardon him for this trifling sin.

The wayfarers go on to the house and find the Deacon's wife at work, and a similar conversation takes place. They then tell her that if she kills her child and sprinkles its blood in the courtyard, the dumb will speak, the blind will see. She follows their advice; the miracle takes place, and when she looks at her child she finds it alive and playing in the cradle with a *golden apple*, and it tells her that the old men are angels.

Similar Stories in Brittany.³—"Ste. Touina," "L'ermite et la bergère," "Le roi Dalmar." These stories have one curious feature in common, to which M. Dragomanov does not refer: in each case, the child, after the sacrifice, is playing with *oranges*. In some of the stories given above we have drawn attention to this feature: *the yellow gold pieces, the golden apple, the orange*, all, evidently, have a common origin. We do not think it necessary to give any account of these stories, as they are easily obtainable in French, while "Faithful John," in the collection of the Brothers Grimm, is familiar to all our readers.

¹ Shapkarev: *op. cit.*, p. 123-4.

² V. Karajich: "Srpske narodne pjesme," ii, 3. Cf. *ibid.*, "iz Khertse-govine," 316-318.

³ Luzel: "Légendes chrétiennes de la Basse Bretagne," t. ii, pp. 11-17, 64-81.

III. THE RUSSIAN STORY OF THE CHRIST-LOVING MERCHANT.¹

A certain merchant by a munificent alms had made the fortune of a beggar, but some time afterwards he himself was afflicted, like Job, with sores, and spent all his money in seeking a cure.

He was recognised by the prosperous man, whose benefactor he had been, and when the latter heard that the blood of a firstborn child could alone bring health to the diseased merchant, he made the sacrifice in the absence of his wife, and when she returned she found her son alive.

The belief that the blood of a child, especially of a firstborn son, will cure leprosy is, says Kostomarov, very widespread. Among the Jews there is an apocryphal story to the effect that this is why Pharaoh wanted to slay the Israelitish children; and in a Jewish book of the Passover ritual, printed in the sixteenth century, there is a picture representing the Egyptian King, covered with sores, standing in a bath, while his nobles open the veins of children whose blood spurts on his body; in the background are women weeping. Kostomarov says, however, that the superstition is a relic of pagan times, which has been borrowed by the Jews. It will be noted, in the story of the Christ-loving merchant, that though the child is restored to life the healing power of its blood is not denied.

*Georgian Story of the Grateful Merchant.*²—A merchant was travelling over the mountains with a caravan, when, at Bonlisi,³ he arrived one night at an inn, the landlord of which took no payment from his guests. Before morning a heavy snowfall had closed the road, and the traveller had to stay imprisoned in the hostelry till spring. The host had a son who was leprous, and a perfect monster of ugliness, but, being unwilling to show such a disgusting object to his guest, denied that he had any children. When the snow had melted, the merchant left, after protesting his gratitude for the kind entertainment he had received. He had not proceeded far when he was overtaken by the boy, who had escaped from his father, and insisted upon accompanying the merchant. The latter on reaching home consulted a doctor, who said that the blood of a two-year old child would cure the leper. The merchant, anxious to prove his gratitude to his benefactor, sent his wife out of the way, and proceeded to kill his child, who was of the requisite age. The cure was effected; but immediately afterwards the mother came running in, saying that she had "pains in the breasts and the belly," and therefore she was sure something had happened to her offspring. She took the baby out of the cradle; it was quite

¹ Kostomarov: "Pamyatniki starinnoi russkoi literatury," i, 117-8.

² Tsagareli (translator): "Kniga mudrosti i lzhi," N. 125. The collection was written in the seventeenth century by Prince Sulkhan Orbeliani, a friend of La Fontaine.

³ Probably Bolnisi, a village among the hills south of the river Kura.

well and began to suck, but there was a mark on its face *like a golden ring*.

Amis et Amyles.¹—In this story of the Damon and Pythias of the Chansons de Geste we have an episode of a similar character, worked out with more attempt at art than in any of the popular stories given above, but it will be noticed that the *oranges* still form a prominent feature in the scene which follows the sacrifice.

THE ORIGINAL SOURCES OF THE ABOVE LEGEND.

The three groups of stories have a sufficient number of points in common to admit of their having the same origin, and the nature of the moral teaching which they inculcate is comparatively modern in tone. It is to Asia that we must look for the primitive form of the legend.

Mussulman stories about the preservation of Moses.²—As soon as Moses was born the idols fell down in the temples of Egypt, and Pharaoh heard a voice commanding him to worship the one God, and threatening him with death if he disobeyed. In the morning Pharaoh's astrologer told him of the birth of a child, among the Hebrews, who would be fatal to him. Haman went into the house of Jochabed, the mother of Moses, who had hidden her child in the stove, and put wood over him, and then gone out. When Haman had searched the house he ordered the wood in the stove to be lighted, and went away. Jochabed came in, saw the fire and was alarmed; but Moses said to her from the stove, "Be of good cheer, mother; God will not give the fire power over me."

The Arabic gospels.³—In another version of the same story, it is the sister of Jochabed who lights the fire, not knowing that her nephew is there. This gives us a point of transition to the apocryphal stories of Christ's childhood which are found in the Arabic gospels.⁴

Caleb the son of Mary.⁵—There were in the same city two wives of one man, who had each a son sick. One of them was called Mary and her son's name was Caleb. She arose, and taking her son, went to the lady St. Mary, the mother of Jesus, and offered her a very handsome carpet, saying, "O my Lady Mary, accept this carpet of me, and instead of it give me a small swaddling cloth." To this Mary agreed, and when the mother of Caleb was gone, she made a coat for her son with the swaddling cloth, put it on him, and his disease was cured; but the son of the other wife died. Hereupon there arose between them a difference in

¹ Ed., Konrad Hoffmann, v, 2935-3241. Cf. L. Gautier: "Épopées françaises," t. i, p. 310. The earliest MS. is of the eleventh century.

² G. Weil: "Biblische Legenden d. Mussulmänner," 134-5.

³ Thilo: "Codex apocryphus Novi Testamenti," 1832, 146-8.

⁴ Thilo: *op. cit.*, xxvii-xxx. Tischendorf: "Evangelia apocrypha," 1876, xlviii-li. Brunet: "Les évangiles apocryphes," 1848-58. Migne: "Dictionnaire des apocryphes," i, 972-982.

⁵ I quote Hone's translation, i, "Infancy," chap. x, v, 1-7.

doing the business of the family by turns, each her week. And when the turn of Mary the mother of Caleb came, and she was heating the oven to bake bread, and went away to fetch the meal, she left her son Caleb by the oven, whom, the other wife, her rival, seeing to be by himself, took and cast him into the oven, which was very hot, and then went away. Mary, on her return, saw her son Caleb lying in the middle of the oven laughing, and the oven quite as cold as though it had not been before heated, and knew that her rival, the other wife, had thrown him into the fire.

We know that the Apocryphal Gospels are very ancient, at least as old as the time of Origen, and the Mussulman stories are of course, much later, yet the latter are more old world in their style, especially the first of the two, and it is interesting to note that the Russian ballad of the Merciful Woman has points in common with both, viz., the persecution of a new-born child, and the introduction of two women and two infants. It is possible that the Armenian and Persian versions of the Apocryphal Gospels might show the connection more clearly, but in any case, it is sufficiently curious that of all the Christian stories on this theme the Great Russian is the most primitive. Professor Dragomanov suggests that the word *Allilueva* may be derived from *Kalyufo* (Caleb).

The motive given for the sacrifice in the Bulgarian legend and its (?) derivatives (i.e., the Little Russian, Breton and Serbian), is different altogether from that alleged in the first group—it is the cure of human ills. Here again we find something analogous in the Gospel of the Infancy.

*Healing of the leprous son of a Prince's wife.*¹—When Joseph and Mary were bringing Jesus back from Egypt, in company with a girl whom they had cured of leprosy, they stayed one night at an inn (reminding us of the inns in the Bulgarian, ecclesiastical Slavonic, and Georgian tales). When the girl was alone with Mary she told the Virgin that she had been speaking with a princess, and had learnt from her the following secret: That after being barren for a long time, she had borne a son, but he was leprous from his birth, and the prince had ordered her either to kill the child or to leave him. She had therefore gone away to live with her afflicted son. The girl had been cured of leprosy by being sprinkled in the water in which Jesus was washed. The princess had her son made whole in a similar manner, and then married him to the girl who had been the means of his recovery.

Of course this is not by any means the same thing as the Bulgarian story, but if we take fragments from other parts of the same Gospel and piece them together, we shall arrive at something like it, and it is well known that oral literature shows many examples of such combinations. A link between the Bulgarian

¹ Hone, i, "Infancy," chap. vi, 19-37.

(second version) and the Russian, is furnished by the gold-lettered book (of the Gospels) which the child in both cases holds in its hands in the flames. We have every reason for believing that the first group of the stories which form the subject of the present essay, may be derived from the Apocryphal Gospels. The second (Bulgarian, &c.) group, in spite of numerous differences, evidently originated in the first. But the third series of stories (the Christ-loving merchant, &c.), in spite of the mention of the inn, cannot thus be accounted for; they are more modern in tone, and we must seek an explanation of them elsewhere. The Georgian is evidently the oldest of the three, the Russian comes next, and the French is the most modern. The idea, too, of a God who wanders about the world is contradictory to the religious systems of Western Asia; it is not to be reconciled with the monotheism of Jews, Christians, and Mussulmans. In the literature of Buddhism, we find not only divine persons travelling on earth, but the ethical doctrine of sacrifice carried to such an extreme as to permit of the offering up of children. Some have asserted that the story of Abraham and Isaac belongs to this religious system, but there is more reason to attribute it to the most ancient period of Hebrew history, when human sacrifices were supposed to be pleasing to God. This has nothing in common with the teaching of Sakya-Muni, who commands his followers to sacrifice themselves, their wives and children, even for the sake of the most worthless man.

Buddhist stories.—The story of the throwing of a child into the stove, for the sake of a guest, and the restoration of this child to life again, occurs as an episode in a story in the Indian collection entitled *Vetālapañcaviṃśati*, which in the opinion of Benfey, is probably of Buddhist origin.¹

Story of Vessantara.—The giving up of a man's children by him to any beggar who may ask alms, is the most characteristic feature of the story of Prince Vessantara, a story which is known to the Buddhist world from the Pacific Ocean to the steppes of European Russia. Vessantara is the last incarnation of Buddha in the form of a Bodhisatva; on account of his self-renunciation, he at length becomes worthy of incarnation as the King's son Sakya-Muni, who was the most perfect Buddha. Vessantara begins by giving to the natives of a neighbouring kingdom, who were suffering from drought, a white horse which had the power of bringing rain. "Why do they not demand my eyes, or my flesh?" said the Merciful Prince. His fellow-countrymen and his father, displeased at his generosity, exile him, and he goes away to the woods with his wife and two children. To beggars he gradually gives away all that he has, and finally bestows his children upon a Brahmin who cruelly ill-treats them. "I shall be Buddha!" is Vessantara's continual cry. Last of all the god

¹ Benfey: "Pantschatantra," i, § 5. The version current among the Kalmucks is found in Jülg: "Kalmückische Märchen," Leipzig, 1866, and "Mongolische Märchen." Innsbruck, 1868.

Sekra (Indra) takes the form of an old Brahmin, and demands Vessantara's wife, and when the holy man has renounced her too, the god takes his divine form and informs him that after one more incarnation he will gain the rank of Buddha.¹

Story of faithful Viravara.—The complete story of Vessantara is found only among the Buddhist peoples, but there is another Indian tale which has penetrated into almost every part of Europe, that is the one which tells about the faithful Viravara, the best version of which is found in the *Hitopadesa*.² Viravara is in the service of a king who gives him a munificent salary, but it is all spent in the service of the gods and for the good of mankind. One night the king hears a woman weeping, and asks Viravara to go and find out the reason. The servant finds in a graveyard the weeping female, and learns from her that she is the king's destiny, and is weeping because the goddess Druga has resolved that the king must die within three days, unless Viravara will slay his son as a sacrifice to the goddess. The faithful Viravara makes the sacrifice with the consent of the child and its mother. His daughter, out of love for her brother, yields up her life also; his wife dies of grief; Viravara kills himself. The king had followed Viravara at a distance and heard the words of his destiny. When he knew what had taken place, he did not wish to survive his loyal servitor, and was on the point of committing suicide, when the goddess restored the four victims to life by means of an elixir.³

It would be an interesting study in international psychology to compare all the numerous existing versions of the stories referred to above. Let it suffice to say that in those which are real folk-tales, we notice an invariable dislike of the idea of an aimless sacrifice, or a murderous one; they all seek some motive to excuse the crime, it is generally accepted as a lesser evil furnishing means of escape from a greater. In the Great Russian story the motive is love of God and of the faith, in the Bulgarian love of the poor, in the Georgian gratitude for past kindness.⁴

¹ Hardy: "A Manual of Buddhism," 116-124. Uphan: "History and Doctrine of Buddhism," 36-38. Koeppen: "Die Religion des Buddha," i, 324-326.

² Cf. Hardy: *op. cit.*, 114. Benfey: *cp. cit.*, i, § 168.

³ Lancereau: "Hitopadesa," iii, No. 9. Luber: "Vetāṣpaṇḍavin-ṇati," 35, &c. Oesterley: "Baital Pachisi," No. 3 and notes. Cf. Persian and Turkish versions—Pertsch: "Über Nachschabi's Papagaienbuch," in "Zeitschrift d. Deutschen Morgenländ. Ges.," xxi, 1867, 516, 517. Rosen: "Tuti Nameh," i, 42-60. Cf. also "Lal Behari Day," Folk-tales of Bengal, No. 2, and Miss Frere: "Old Deccan Days," No. 5. European versions are numerous and well known to our readers.

⁴ The editor of the *Sbornik* has appended to Prof. Dragomanov's essay two additional Bulgarian versions of the story of the brothers who travelled with God.

The following notes have been subsequently received :—

Regarding the Mussulman and Christian stories, is it fantastic to suppose that they are meant to show the superiority of Judaism, Islam, Christianity, &c., to the worship of fire? In chapter iii of Hone's translation of "Infancy," i, Zoradascht (Zoroaster) is mentioned, and in verses 6, 7, 8, there is an account of a miracle in which a swaddling cloth was fire-proof.

Another Serbian version.

"Volksmärchen der Serben. Gesammelt und herausgegeben von Vuk Stephanowitsch Karadschitsch." Ins Deutsche übersetzt von dessen Tochter Wilhelmine. Mit einer Vorrede von Jacob Grimm. (Berlin, 1854.)

No. 14, pp. 118-123, is entitled: "To him that asks little much shall be given." I summarise it as follows, underlining the passages of most importance.

There were once *three brothers* who owned nothing in the world, excepting a pear-tree which they attended to by turns. God sent an angel to see how the brothers were getting on, with orders to provide them with a better livelihood if necessary. *The angel transformed himself into a beggar* and begged a pear from the brother whose turn it was to watch the tree. It was given to him, and on the next two days the other two brothers also gave him a pear, each from his own stock of fruit.

On the fourth day the angel, disguised as a *monk*, came very early and found all the brothers at home. He said to them, "Come with me and I will give you a better means of livelihood." They came to a brook, and the angel asked the eldest, "What do you wish to have?" "*That this water should turn into wine and belong to me.*" The angel made the sign of the cross over the water with his stick, and the miracle took place. The eldest brother became rich.

The angel went on with the other two, till they came to a *field covered with doves*. These were turned into *sheep* at the request of the second brother, and he too was rich.

The youngest asked that God would give him a true Christian wife. The angel replied that this was a very difficult prayer to grant. "In the whole wide world there are only three, two of them are married already, and the third has two wooers." They reached a city where they found a king's daughter of truly Christian spirit, but two emperors had already "laid their apples on the table." (Custom even at the present day in Serbia for wooers to place on the table of their ladylove an apple with coins inside it.) The young man put his apple with the others.

The maiden's father objected that the last suitor was but a beggar compared with the other two. The angel proposed that the princess should plant three vines, one for each suitor, and the *— on whose vine grapes had grown by next morning would be accepted*.

Of course the poor man's vine was the only one to bear fruit, and he won the bride.

After the marriage the angel *took the pair away into the woods*, and left them there for a year. At the end of this time, God sent the angel to see how his *protégés* were getting on. The result was the same as in the Little Russian story, as far as the two eldest brothers were concerned—they were both sent back to their pear tree penniless. The third brother was found in the wood living in poverty with his wife. They gladly took in the beggar-angel, but they had no flour to make bread for him; they were in the habit of grinding the bark of trees for meal. The wife made a loaf from meal thus prepared, and put it on the fire to cook. When she went to look if it was baked, she found a fine wheaten loaf, so large that it had lifted up the lid of the dish in which it had been placed. She and her husband thanked heaven that they were able to give their guest suitable entertainment. They put the loaf before the angel with a jar of water, but as soon as they began to drink it had turned to wine. The angel made the sign of the cross over the hut, and it turned into a royal palace full of wealth. They lived happily afterwards.

There are so many analogies with the stories in Dragomanov that this must be connected with them. The change of the child into a loaf is perhaps due to some fastidious narrator in modern times.

In the "Narod" (a Galician review) Ivan Franko has given an account of the Old German poem, "Der arme Heinrich." Heinrich, lord of a village, becomes infected with *leprosy*, and a leech in Salerno tells him that he can only be cured by the blood of an innocent maiden. A village girl offers herself, but at the decisive moment Heinrich refuses to allow the sacrifice. He is cured, nevertheless, and marries the maiden. The poem is attributed to Hartmann von Aue (XII-XIII century).

The story of the sacrifice of a child for the sake of one's friend is found in the "Seven Sages," whence it was probably taken by the author of "Amis and Amiles."

Supplementary note to the summary of Anuchin's monograph on The Use of Sledges, &c., at Burials.

The Greek Church in Bulgaria will not allow anyone to marry a fourth wife, and in case of such a union does not recognise its validity. Upon the death of a man who has transgressed in this way his friends and acquaintances do not go to the dead man's house and accompany his body to the grave; *his corpse is removed from the house through one of the windows.* (Communicated by Mr. J. P. Slaveikov, of Sofia.)

Family Life of the Haidas, Queen Charlotte Islands.

By Rev. C. HARRISON.

THE Haidas seem to be related from the lowest in rank to the supreme chief of the nation. Slaves, who were in thralldom until quite recently, do not rank. They were formerly bought and sold like dogs, but within the past fifteen years the missionaries have succeeded in inducing the Indians to free their slaves. Before the advent of the missionaries, a Haida chief had one or more wives, together with female slaves for concubines. The children of free born wives were alone reckoned as his, and the children of the slaves were sold or retained in slavery as he desired. The members of one crest cannot marry with others of the same crest; for instance, a bear cannot marry a bear, but must marry a whale or an eagle.

THE CAMP OR RANCHERIE.

The houses of the old Haidas are objects of intense interest to visitors. These structures are rectangular 70 x 60 feet, and are built with cedar hewn to the proper proportions with stone adzes or axes, having been erected before iron implements were known to the Haidas. The rafters are immense pieces of timber running the full length of the building, and hewn flat on the inside. The chopped surface is so level that a person would believe at a casual glance that the timber had been sawn. Some of the houses are built over pits, between which and the walls there is a space ten feet wide. The pits are about ten feet deep, and are entered by two steps, each five feet high, which is an evidence of the exaggerated notion Indians generally have of themselves. The pits serve as a protection from dampness, from smoke, and from sudden attacks of enemies.

THE CAMP FIRE.

In the centre of the pit is the camp fire. During the winter months they always keep a good fire burning both day and night. I have seen as much as two cords of cedar piled up at one time. Around this fire the Indians sleep, and the children play. It is also their cooking department, and there all the food is made ready. There the Indians talk of olden times, and there it is where the family discussions and conversations are held. Around this structure the ladies and gentlemen of the Haida nation dress and make their toilets, and all the duties performed in the white man's bedchamber were there discharged in the palmy days of old. They also eat their food around the camp fire. The old Indians do not need tables, and chairs are also dispensed with. A few good sized kettles are placed on the ground near the fire, and the family squat on the ground around them. One contains boiled

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halibut, another potatoes, another boiled salmon, and another filled with berries or grease. They use wooden spoons, also spoons made out of cow and deer horns, both large and small, and dig into which pot they like the best, and take both their soup and fish together. The women as a rule prepare the potatoes for the men and put them on the boards around the fire. The practice of making fire by simple friction is now at an end, as too much time is required and the result is not always satisfactory. They now use the white man's match. But if away from home and there are no matches, they make chips of dry cedar, and sprinkle a little powder over them, then they strike a piece of flint on the steel musket, which causes the powder to ignite, and set fire to the chips.

FOOD.

The Haidas feed twice in the day; early in the morning, and after the day's work is over. They have a great variety of food, such as bear's meat, salt venison, fresh, smoked, and dried salmon, fresh and dried halibut, hairseal, furseal, sea lion, salmon spawn, herring spawn, oolachans, herrings, flounders, black, red, and rock cod, crabs, clams, cockles, abalones, pecten clams, razor clams, rock borers, small fish grease, berries, and apples. They mix oolachan or small fish grease with all their food. They grow turnips, potatoes, cabbage, carrots, and parsnips, sufficient to last them for the year, and in fact, many of the old Haidas were accustomed to sell some of their potatoes up in Alaska. They formerly used the inner bark of the hemlock tree as sugar. They also eat many varieties of roots, as the fern root, wild carrot, and liquorice root.

ROYALTY.

Of all the blue blood in the world, the Haida, I dare say, is the most exclusive. I knew one old dame who could in appearance have shamed Macbeth's witches, being conspicuously ugly and disagreeable. She was greatly venerated by the bears and eagles, and was importuned at all times to enter their houses, and make herself at home. When she condescended to enter any house there was a special assembly for the occasion. The brawling children were subdued, and dignified quiet took the place of loud ejaculations and laughter. This woman had more authority than any of the chiefs. She was a chieftainess, and was descended from a long line of kings of the ages long gone past. Queen Charlotte Islands were formerly ruled by this woman and her husband. Each village now has its chief, who is a factor for good or evil as the case may be. Each succeeding chief must be a nephew or other relative of the deceased chief, but it is an utter impossibility according to the Haida laws for a son to succeed his father or even to take his name.

INFANCY.

As soon as the baby is born into the world, his mother wraps him in half a blanket, and puts him into a hammock, either to sleep or cry as he may wish. He very soon learns to take care of himself, and knows that he must fight his own way through life. Should he become ill he is taken great care of, and the mother nurses him carefully; otherwise, with the exception of nourishing the young one, it is left to go its own way whilst the mother attends to her duties. Very seldom do the Haidas bind their infants on a board, or tie them up into a motionless bundle. They give them their liberty, and leave them to themselves until the feeding time comes round.

WOMEN.

A girl as soon as she reaches puberty has the lower lip pierced, and this orifice is enlarged from time to time. A piece of whalebone or stone a quarter of an inch long, a quarter of an inch wide, and a sixteenth of an inch thick is inserted in the slit. The size of the stone is increased according to the marriage of the girl, and the number of children she bears, so that it is really a mark of caste. The Haida women have more lip than any others we know of, and to see a crowd of them quarrelling, the lip shaking with anger, is a sight not to be forgotten. The old women are generally at the bottom of all rows, and also act afterwards as peacemakers, looking as innocent as lambs. The women are great diplomats and generally contrive to have their own way, and it is a great mistake to imagine that they are treated as slaves.

MARRIAGE.

When a man takes a liking for a woman, he goes to her parents and makes overtures by presenting them with blankets amounting to a considerable sum, according to the price that she is valued at. If they consent he makes known his wishes to his desired wife. She then tells her companions, and they come together and assist her to get ready for the occasion. When everything is finished, the man goes to her father's house, and there makes a feast, and during the feast he rises and claims her in the presence of all as his wife. The following day they go to his house, and the bride's father gives biscuits and tea to all there assembled, and then the couple are considered to be married. During the whole time of the negotiations, courtship and marriage, a cannon is fired at intervals of six hours, to let all who are at the neighbouring fishing stations know. As I have before stated, members of the same crest cannot intermarry. The children always take the crest of their mother.

DIVORCE.

When the husband is no longer satisfied with his wife he leaves her, and she returns home to her family. Her uncle then demands payment from the man for the use of his niece, and the amount varies according to the number of children born. The charge is generally twenty dollars for the woman herself, and ten dollars for each child. The children are taken charge of by the wife's mother and father, and no further trouble is given to the parents. Healthy men and women each have their own work to perform, and are able to earn their own food and clothing, consequently a woman is just as well circumstanced if not better without being married. Should the wife desert the husband, the man waits until she marries again, and afterwards he takes another woman home to be his wife, without being liable to pay the fine. The property belonging to the husband remains his own during his married life, and the woman's property remains her own whether living with her husband or not.

DISKS.

The women are very fond of ornaments for the neck, hand and head, and each village has a native jeweller. The best and most skilled of all the native jewellers on the North Pacific Coast is the nephew of the old Chief Edenshaw. Edenshaw was the first who attempted to work with silver and gold, and he succeeded remarkably well. The jewellers make from half-dollar and dollar silver coins, and also from gold coins, bracelets, finger rings, earrings and bangles. The coins are beaten out to the desired thickness and width, and then bent into shape and carved. Some of the bracelets fasten with clasps, while others retain their shape by the natural spring of the metal. The finger rings are sometimes not joined after being bent. They are made both plain and ornamental, and sometimes an eagle or two hearts are carved on them.

EARRINGS.

Earrings are worn principally by the younger portion of the female sex, and are all manufactured by the jeweller of the tribe after the fashion of those worn by the English ladies. The ear of the old women are pierced in two and three places, and pieces of bone and wood about one inch in length, a quarter of an inch wide, and a sixteenth of an inch thick, were formerly inserted and worn continually.

NOSE RINGS.

Nose rings are still worn among the Haidas. These rings give the wearers an uncanny appearance. The lobe of the nose is pierced, and a piece of whalebone carved into a semicircular

is inserted. The bone is about two inches in length and three-sixteenths of an inch in diameter. Only the old Indians have their noses pierced, and they seldom use the ring, except when in full dress for the dance or the feast.

PHYSIQUE.

At the present time both the men and women are physically remarkable. The men attract attention by their size and apparent strength, and by the fulness and agreeableness of their features. Some of them are six feet four inches tall, and their bodies are developed in perfect proportions. They are expert seamen, and can sail their buoyant canoes in a storm that would be dangerous for ships. The women share the good qualities of the men. Some of them are tall, while others are under the average stature of womankind. They are exceedingly strong; they cut wood, sail and paddle canoes, and work as hard as the men. They have handsome and agreeable features, and are not so dark as the men. In intellectual power and mental faculties, the Haidas excel the ordinary class of Indians on the Coast. If compared with other Indians in British Columbia and Alaska, they will be placed at the head in respect to physique and mental activity. They are neither stupid nor foolish. When asked to think of things outside their own intellectual world they are quite ready to acknowledge themselves ignorant and willing to be taught. The young people are eager to be taught any fresh subject, and also evince a determination to master their books.

DRESS.

The women dress in prints, and not a few of them wear bonnets and hats. Before the arrival of the whites their clothing was scanty. They wore petticoats made of the roots of cedar and spruce. The men now purchase good tweed clothes, and the women indulge in the luxury of prints, ginghams, and sometimes silks. Old men are occasionally seen early in the morning wrapped in their blankets, but they soon have to dress decently in order to escape the ridicule of their grown-up sons and daughters. Girls wear a cotton dress only, and the little boys run about in shirts, unless they are going to see white men, when they dress specially for the occasion. The men and women seem to pay considerable attention to their personal adornment. They are proud of the mass of brilliant, coarse, black hair, with which nature has provided them. The men cut their hair periodically, endeavour to cultivate moustaches and whiskers in imitation of the whites. The older men have not a single hair on their faces. The women dress their hair in braids or knots at the back of the head, and in bangs, for the Hudson's Bay Company has supplied them with curling tongs. Their glass beads are giving place to silver and gold ornaments, and will soon be valuable as curiosities.

as the present generation is not learning the arts of the ancient Haidas. And it may truthfully be added that if the Indians on the entire coast do not take better care of themselves than they have done in the past, not only will the white man's clothing and ornaments supersede the old garments and gewgaws, but they themselves, their villages and their hunting grounds will soon disappear, and their places will soon be occupied by those whom they are now so fond of imitating.

BURIAL CEREMONIES.

Many people look upon the Red Indian as a wild and uncultured savage. In reference to the duties which are required to be performed towards the dead they are not so. All men, and especially the chiefs, are greatly honoured on the departure from this mundane atmosphere. When he dies, the next to succeed him (generally his nephew) is presented with blankets, dishes, beads, guns, canoes, prints, pottery, dogs, axes, and furniture. They are not, however, for his own benefit, but for the benefit of the deceased, and those who take part in the burial ceremony. In fact nothing seems to be too valuable for the funeral. Christians are afraid to break the news of a friend's death to his wife, father and mother. Not so, however, with the Haidas. I have seen them make the coffin, and decorate it in the presence of the sick person when they have come to the conclusion that he will not recover. They also tell the sick man that he will not recover, and urge him not to attempt to do so. The members of his tribe and all the chiefs of the other tribes come in to see him, and talk of nothing else but of others who have had the same sickness and died. When he hears what they have determined that he should do, he then refuses to eat and drink, and so hastens his demise. When gasping for breath he is washed, and his shroud made of white cotton is then put on. White stockings are put on his feet, he is clad in a pair of white woollen drawers, and a white handkerchief is tied around his head. His neck is encircled with beads, a spot of red paint is put on either cheek, and a black one on his forehead. When thus arranged, all his friends enter the house, and wait until he dies. If the sick person be of a strong constitution they were accustomed to administer poison; in fact, the daughter of one old woman who was dying came and asked me to give her mother some poison, so that she might die before the salmon season commenced. They think very little of each other when in health and strength, but as soon as they are dead they become valuable, and are called good Indians. When a person dies they arrange a bed in the corner of the house, and cover it with white cotton, and place the deceased thereon, and then they cover him with a sheet of the same material. In twenty-four hours' time the body is placed in the coffin, and arranged in the position that it has to be buried. Then the time of mourning comes. All the old men of the tribe, and the friends and relations of the deceased

to groan, and sigh, and cry. The men groan out *āchadiā dī kunē!* Oh dear, my son! and the women cry *ānāniā dī kunē!* Oh dear, my son! After they have wept for one or two hours the greatest chief present calls for silence. Then the smoking feast commences. Tobacco and pipes are provided for everyone who attends, and the smoking begins in earnest and continues for several hours, until all are sick. During the smoking entertainment the chiefs and friends of the deceased, according to rank, will begin to extol the virtues of the deceased, and try to console his relations by reference to his disposition towards the poor, his love for his friends, and his kindness towards his wife and children; and they also are very careful to refer to his liberality when making a free distribution of his goods, namely, a *Pottatch*. Everything done in his past life passes under review, and they then conclude by saying that his time had come, and that the gods wanted him, and he, being a good and wise man, had obeyed their summons. When anyone of importance dies news is carried to all the other villages, and they at once come to see the dead man, and also consult with his relations regarding the funeral arrangements. If the deceased person should belong to the Bears, the funeral preparations are made and conducted by members of the Eagle Crest and *vice versa*. After the funeral is over all the people are feasted by the deceased man's nephew, who then assumes his uncle's title and property.

The following article by Mr. Wray, Jun., Curator of the Perak Government Museum is reprinted from the Kew Bulletin No. 58, by permission of Her Majesty's Stationery Office:—

IpoH Poison of the Malay Peninsula.

(*Antiaris toxicaria*, Lesch.)

IPOH AND OTHER ARROW-POISONS USED BY THE ABORIGINES OF PERAK, IN THE MALAY PENINSULA.

There are two tribes of aborigines in Perak who use arrow-poison, viz., the Semangs and the Sakais. The former people, who live in the north of Perak, use both blow-pipes and bows and arrows, while the latter, who live in the southern part of the State, use blowpipes only.

I recently visited Ulu Selama, where some of the Semangs live, and was taken by them to a place called Kuala Jah, at, I should estimate, 500 feet elevation, where I was shown, growing in virgin forest, within 100 yards of one another, two large trees. The larger was about 5 feet in diameter at 5 feet from ground, and had a trunk full 100 feet in height to the first branch. It had been tapped many times, the bark being deeply scored to a height of 25 feet from the ground; the smaller tree was all over. The bark externally is white, and interna

orange-brown, and is very thick and fibrous. On cutting fresh scores into the bark, the dirty whitey-brown sap ran very sparingly out, and was conducted down palm leaves stuck on to the trunk of the tree with clay, into bamboos. The scores are cut slanting alternately right and left, like what is known as herring-bone stitching, with the lower ends of the scores pointing inwards. At the bottom of each series of scores is put a leaf, fastened to the bark with clay, to lead the sap which trickles down into a bamboo. We only succeeded in getting about 3 oz. of sap the first day; but two days afterwards, by erecting a scaffolding around the tree and extending the scores up the trunk we got about one pint. Three ounces of sap, the Semangs said, was enough to poison 100 blowpipe arrows.

The sap having been collected from the trees, a spatula-shaped piece of wood was taken and heated over a clear wood fire, and a small quantity of the sap poured on it and spread out with another but smaller wooden spatula, and held over the fire till nearly dry, and the process repeated till all the sap was evaporated. There remained on the spatula a dark brown gummy substance, on which the points of the arrows were rubbed three times, being dried over the fire between each application of the poison. This simple process completed the preparation of the poison; but as there are sometimes other things mixed with the Ipoh, I shall return to this part of the subject again.

The sap, which I found to be bitter and biting in taste and decidedly acid to test paper, on exposure to the air quickly darkens to a brown colour, and it yields when dried on a water-bath 29 per cent. of solid Ipoh. This substance, if put thinly on a slip of glass and examined by a microscope, is seen to contain numerous crystals of antiarin.

* * * * *

What Griffith says about the poisonous properties of the Ipoh being derived from admixture of arsenic, was information probably derived from the Malays, for the aborigines are quite ignorant of that poison, and, as Professor Ringer points out, the action of arsenic is very different from that of Ipoh, besides which animals killed with arsenic would be quite unfit for food.

I may here observe that it is the aborigines alone who use poisoned weapons in the Peninsula. The Malays put arsenic on their kris and spears, but it is employed solely with the view of bringing out the damaskeening of the blades, and not as a poison.

I have had one opportunity of noticing the effects of Ipoh poison on a human being. It occurred while I was descending a river in Upper Perak in 1889, and I made the following note at the time: "While unloading and carrying the baggage over the rocks poisoned blowpipe dart fell out of a quiver and stuck into the upper part of one of the men's feet. It was at once pulled out and Semang squeezed the wound to get out as much blood as I then tied a tight ligature round his leg and put lime juice on the wound. The man complained of great pain in the

of cramps in the stomach, and vomited, but these symptoms soon passed off. The point only went into the foot about one-third of an inch, and the dart was instantly pulled out. The Semangs said that had it gone deep into a fleshy part of the body it would have caused death."

The blowpipe darts are only about one-twentieth of an inch in diameter, are sharpened to a fine taper point, and are poisoned for a length of nearly one inch and a half, the poison being put on very sparingly near the point, so as not to interfere with their penetrative power. A slight notch is often cut in the dart just below the poisoned tip, so that it may break off into the wound.

As previously stated, besides the blowpipe darts, the Semangs use bows with poisoned arrows. These arrows have detachable fore-shafts, with either barbed iron or hard wooden heads. These heads are about 2 inches long by $\frac{3}{4}$ inch broad, and are thickly coated, except near the point, with poison. I have not seen the effects of one of these arrows on an animal, but the Semangs amongst whom I lived on one occasion for about three months, say that they are able to kill pig, sambur deer, wild oxen, and even rhinoceros with them, and as I have seen bones of these animals at their camps, there appears to be no reason to doubt the truth of the statement. It was asserted that a deer would drop in from 30 to 40 yards after being struck by an arrow, the rapidity of the action of the poison depending on the vascularity of the portion of the body pierced by the arrow.

I may here mention, as the subject has been referred to in the previous paper, that the bark of the *Antiaris* is used by both the Semangs and Sakais as bark cloth. It is prepared as follows—A young tree is felled and cut into pieces of suitable length. With a knife the outer portion of the bark is shaved off and the inner bark is beaten with bat-shaped pieces of wood until it will slip off from the stem. The bark is then put into running water, in which it is allowed to remain for the space of one month to free it of the poison; then it is beaten with wooden bats, on one face of which furrows have been cut at right angles to each other, to produce a grain on the finished cloth.

As stated above, the Semangs sometimes mix other poisons with the Ipoh. The plants from which these are derived are known to the Malays as *likir* and *gadong*. In both cases it is the expressed juice of the tubers that is employed. The *likir* is an Aroid belonging to the genus *Amorphophallus*, and the *gadong* is a thorny climbing yam belonging to the order *Dioscoreaceae*. Botanical specimens of both these plants have been sent to the Calcutta Botanical Gardens, but identifications have not yet been received. A flowering specimen of the *gadong* I send with this paper. It is probable that the specimens of *likir* have been transmitted to Kew by Dr. King, in which case they will be found numbered 3327.

The tubers are rasped up fine with a knife, and the soft mass put into a piece of cloth, which is then forcibly pulled through two of stick tied firmly together a short distance apart, so that

the juice, which is very acrid, is expressed without coming in contact with the hands. The juice of the *likir* and *gadong* tubers so obtained is mixed with the Ipoh sap, and the mixture dried on a wooden spatula over a fire, and the arrows poisoned in the way that has already been described.

The tubers of both these plants, which contain starch in large quantities, are cut up into thin slices and suspended in a basket in running water and allowed to steep until the poison contained in them has been dissolved out. They are then cooked and eaten by the aborigines, and also occasionally by the Malays.

The acrid juices of these plants are said not to be fatal by themselves, and the part they play when mixed with the arrow poison is to cause local irritation, which hinders wounded animals from escaping before the antiarin has time to act; but all the Semangs and Sakais I have asked have said that the pure Ipoh is more deadly than the mixture.

A bottle of *gadong* juice and another of *likir* juice mixed with spirits of wine are included in the collection accompanying this paper.

The juice of the tubers of the *gadong* is decidedly acid when fresh. It smells somewhat like raw potatoes, and is bitter and astringent, producing a stinging sensation on the tongue, and a very unpleasant dry feeling in the mouth, which persists for a considerable time. The acidulated juice yields a yellowish-brown precipitate to a solution of iodine in iodide of potassium. The precipitate re-dissolved in sulphurous acid and evaporated yields long branching needle-like crystals. The juice mixed with spirits, filtered and evaporated to dryness and re-dissolved in dilute sulphuric acid filtered and evaporated again, also yields long branching crystals, which have an astringent taste like the juice, and are possibly the poisonous principle.

The freshly expressed juice of the *likir* tubers is faintly acid to test paper. It smells somewhat like beetroot, and is acrid, and causes irritation if it is applied to the skin. It appears not to contain any alkaloid, as it affords no precipitate when a solution of iodine in iodide of potassium is added to the filtered and acidulated juice, nor when the juice is just rendered alkaline by potash. When distilled, the distillate smells like the juice, and is slightly opalescent, but it does not cause irritation when applied to the skin, or even to a wound. It tastes the same as it smells, and does not injuriously affect the tongue.

To complete this inquiry into the sources of the arrow-poisons of the aborigines, I visited the district of Batang Padang, to ascertain how the Sakais prepare their poison. As previously mentioned they only use it on their blowpipe darts, as bows and arrows are not employed by them.

I visited two Ipoh trees, both of which were deeply scored like those in Selama. The scoring of the bark was not, however, so regular as with the Semangs, and I saw no sign of the herri-bone method. The usual plan was to cut detached V-

incisions, and the method of collecting the sap differs also from that already described.

Several pieces of bamboo are taken, and to each is fixed a piece of wood, which is ingeniously cut, so that when its chisel-shaped upper end is applied to the bark of the tree below a score the sap flows, first down its upper surface till it meets a cut channel which conducts it round to the under surface, and so into the bamboo receptacle.

The sap being collected, two wooden spatulas are prepared and a piece of large bamboo split in half so as to form a small trough and the sap poured into it. The larger spatula is heated over a fire and the sap ladled out of the bamboo and spread on its heated surface by means of the smaller spatula and dried, by being held with the uncoated side over the fire; it is then reversed and sap spread on its upper or uncoated side, and when that is in its turn nearly dry again reversed, and a fresh supply of sap put on to the surface first coated. This is repeated until all the sap has been inspissated.

The darts are coated in the manner before mentioned, and when the poison is very hard and dry and will not soften by being heated, a few drops of water are put on to the spatula and mixed, by means of a smaller spatula, with the poison until it acquires the right consistency to apply to the points of the darts.

The Sakai and Semang methods of collecting and preparing the poison are really the same, only differing in details. The Sakais, however, do not mix *likir* juice with the Ipoh and the way they mix the *gadong* juice with it is not the same as that employed by the Semangs. For this purpose the Ipoh sap is prepared as just described and a piece of the *gadong* tuber is peeled and sliced up fine and placed in a joint of a bamboo, and ground up with water by means of a wooden pestle. The fluid is then poured off and fresh water added and the process repeated. The fluid is then boiled and filtered through leaves in which some fine scrapings of bamboo are put. It is then evaporated in an open vessel over a fire to the consistency of a thick syrup and mixed with the Ipoh in the proportion of three parts of Ipoh to one of *gadong*.

The Sakais living in the plains employ the *Antiaris* poison as a rule, as the plants from which it is prepared are low country forms; but the Sakais of the hills use a poison prepared from three hill plants known as *Ipoh aker*, or root Ipoh, in contradistinction to the *Antiaris* or *Ipoh kayu* (tree ipoh). These plants are called *Ipoh aker*, *prual*, and *lampong*.

Ipoh aker is a large climbing *Strychnos*, with a stem often as much as 3 inches in diameter. It has dark green, glabrous, opposite leaves, with three prominent longitudinal veins. The fruit is to be large and round and to contain seeds about half an inch in diameter and the flower is stated to be reddish. It grows on the hills and I have seen it at over 4,000 feet elevation. The plants now procured were collected on Gunong Batu Putih in the Betang Padang. The portion of this plant from which the

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poison is extracted is the bark of the roots and lower part of stem. It is often employed without admixture and is then prepared as follows:—

The bark, which is burnt sienna coloured, is scraped with knives from the roots; the scrapings are put into a pan with water and boiled, the water is poured off and filtered. Fresh water is added to the bark, which is again boiled for some minutes, and the water poured off a second time. The exhausted shavings of bark are then thrown away, and the filtered infusion, which is bright burnt sienna coloured, is reduced by boiling in an open pan to a syrup. It is then poured while hot into a bamboo, where it solidifies. It is applied to the darts in the manner already explained and is said to be more powerful than the *Antiaris*, but is rendered quicker in its action when mixed with the poison derived from the other two plants above mentioned.

Of these *pual* is also a climber, growing on the hills. The largest stem I have seen was $1\frac{1}{2}$ inch in diameter. It has opposite bright green entire leaves, but its flowers and fruit I have neither seen nor been able to get any description of. The young shoots contain a very fine strong white, silky fibre. My specimens were also collected on Gunong Batu Puteh. The bark of the roots, which is rather pale yellow in colour, is the part of the plant which is employed in making the poison. This arrow poison is said not to be so strong as *Antiaris*, but to be quite capable of killing when used by itself.

The third plant is called *lampong* and is also a climbing species of *Strychnos*. It has opposite, three-veined leaves like *Ipoh aker* only they are considerably smaller, and is stated to have similar fruit, but it grows lower down on the hills, my specimens being collected on the Cheroh hills. Like the two preceding plants, the bark of the roots, which is white, is the part from which the poison is extracted. It is said to be not so powerful as *pual*, but is often employed by itself.

In making the mixed poison six parts of scraped *Ipoh aker* bark are taken to which is added one part of each of *pual* and *lampong* bark and the mixture is exhausted with boiling water, filtered and evaporated in the same way as has already been described, when simple *Ipoh aker* is treated.

It was stated by the Sakias that *Antiaris* and *Ipoh aker* are rarely ever mixed with one another. The latter poison is said to retain its virulence, in the form of an extract, for years.

New Guinea.

A despatch from the Administrator of New Guinea (No. 51) dated August 4th, 1891, contains the following:—

The impression produced on my mind by the Kiriwina (Latitude, $8^{\circ} 33' S.$; Longitude, $151^{\circ} 4' E.$) people and country is a favourable one; it does not appear to me that the popu-

be under 15,000—indeed it may be much in excess of that figure. In many ways they are a long step in advance of the natives on the north-east coast at the next place touched at, Collingwood Bay. In Kiriwina the position of chief is recognised and understood. They are industrious and well fed, and physically they are of superior build. The men all wear the pandanus leaf; the women short petticoats. Giriba and Vakuta seem to be noted places for the manufacture of those latter, especially the kind used for dancing purposes, which are dyed red, black, and white. The ordinary wearing petticoat is of simple undyed leaves; but women seldom came near me in those, but generally donned the dress petticoat, which is worn over the other. The dress petticoat is fastened on the hip for ordinary wear, but is tied in front for dancing. The men tattoo, but only slightly and in a rude way, but delight in ornamenting the bodies by small marks made by burning. The hair is usually worn long, but many have the head shaved, except a small ruff of hair on the occiput. The men seldom wear shell ornaments, but many women have strings of red glass beads. I saw no trace of cannibalism. The outward signs of mourning for the dead are much insisted on. At Vakuta I saw two young widows in one village who wore as pendants from the neck the lower jaw of the deceased husband, richly ornamented with glass and shell beads. At another place a widow who had recently lost her husband, whose jaw was probably not yet prepared for wear, was deeply covered over with black, and had some half-dozen straps, about an inch and a-half broad, put round the body at intervals from the upper part of the chest to the hips. Young men, when they lose their mother, shave their heads and blacken the body until they have given the death feast, which puts an end to their season of mourning. After this is past, men sometimes wear one of the cervical vertebrae of the departed one tied into the hair of the head, as is seen occasionally in Milne Bay. They cook in pots of clay, which they obtain by trading from Murua, Kitiva, and elsewhere. The women seem to perform a considerable share of the work, but the men are by no means idle. On the whole, women have less influence and have much less to say than is the case in many of the ruder tribes on the mainland of New Guinea. This is apparently a consequence of the superior position of the chief in the Kiriwina social system. The men are skilful in the manufacture of fine wooden dishes and bowls in ebony and other hard wood, and their shields and spears are tastefully made. They do not appear to know either the sling (of such constant use in the neighbouring Goodenough Island) or the bow and arrow.

The following notes are extracted from "The Annual Report on New Guinea, July, 1890 to 1891":—

(p. 24.) NATIVE DIALECTS.—Perhaps the most interesting of the seven vocabularies attached is that of the Dabu tongue, on

account of its geographical position and the sharp lines difference between it and the Kiwai-Mowatta language, and the dialect spoken at Saibai, Boigu, &c. These latter dialects are given in last year's Annual Report. Many words in Dabu end in a consonant—g, l, m, n, t, p, r, k; and the ng is not uncommon. In this respect it more closely resembles the Saibai than the Kiwai language. It is just possible that the roots of a few Polynesian words may exist in Dabu, as perhaps "papapi," butterfly (but the more common word is nipurigan, so that papapi may be introduced); "ngoi," cocoanut. But such words as those for boy, hand, cooking, pot, canoe, come, death, eye, hand, louse, mother, river, sago, &c., seem to have no connection with the words which generally denote those objects over much of the Pacific and of the Possession east of the Gulf of Papua. So different are the coast languages on the west of the Papuan gulf from those east of it, that it seems improbable that the western dialects can have given rise to the eastern, or *vice versa*. If they had a common origin, it must have been very remote.

In the Domara-Mairu dialect words are generally the same for, or are understood at, both places when they are printed only under one. The chief peculiarities of the Nada dialect will be found on p. 132. It is interesting as forming the language spoken at the extreme north-east corner of the Possession. It will be seen that Nala and Sinaugola have strong affinities to the central and eastern languages of the Possession, as well as to the Polynesian languages. It is somewhat surprising that Motu should differ so widely as it does from Toaripi, seeing that from time immemorial those tribes have traded with each other. In trading operations, however, they seem to use a jargon that is blended from both languages.

(p. 104.) NOTES ON THE LAUGHLAN ISLANDS, BY WILLIAM TETZLAFF.—The Laughlan group¹ consists of seven small islands. The land is very poor, so that with the exception of the cocoanut little else will thrive. The population is thus mostly dependent for their subsistence on fish and other marine produce. All of the islands are to a great extent covered by cocoanut trees, most of which are converted into copra, which is the principal article of trade on these islands, and wherein the natives are great experts. There are at present about sixty-two families, consisting of about 240 souls, distributed over the group. There is no actual chief recognised by the whole of the population; but, as a rule, three or four families build together and choose one of the oldest men as the chief. There is also a house in each of the small villages set apart for the dead, also for the new-born.

The principal articles of diet are cocoanuts and fish. The latter are mostly caught with nets, or else dammed off and taken when the tide recedes. There are also a few pigs kept on the islands, but they are only killed at feasts or burials. Most of

¹ (Lat. 9° 20' S.; Long. 153° 3' E.)

their food is roasted or boiled. As the islands are fringed by numerous reefs, they are naturally the haunt of large lobsters, crayfish, fish, shells, and other marine animals, of which they are very fond, and which constitute a large proportion of their diet. Of course this is only during fine or moderate weather: otherwise they devote the largest portion of their time to smoking and sleeping.

Yams, breadfruit, sweet potatoes, they trade from Woodlark Island;¹ they usually start from the end of November with the south-east, and return about the end of December with the north-west monsoons; then there is a big feast for about fourteen days, in which time, as a rule, all the food brought over is consumed; then they return to their previous mode of living till the following year. The only break in their monotonous life is the arrival of a ship. There is always a great uproar in the community at a death of any of them, when all the people collect together and sing and cry all night. The corpse is brought to the dead house, and left there for five or six days. The nearest relations take watch and watch over the corpse; when it begins to putrefy, they wipe the sweat and other matter which oozes from the dead body, and smear themselves all over with it. As a rule, the body remains there until it is completely decomposed. Then the body is buried for over a month and then exhumed, and the head and all the bones carefully put together and buried in the bush.

Childbirth.—If a young woman is pregnant, she remains with her husband till labour begins, and then is removed to the place set apart for confinements. The young woman has then to drink a large quantity of water bespoken by the sorcerer; then they believe that labour will be modified to a great extent. During all this time she is strictly watched by her relations and friends. When the confinement is about to take place, a part of a cocoanut tree is brought, and the woman has to sit on it, and birth takes place in the usual course. Sometimes it does happen though that the mother suffers great pain, and it does not unfrequently happen that the mother kills the child on these occasions. The people surrounding her show little or no sympathy with either; but should everything have gone off satisfactorily, the woman has to remain about eight days in the house till the navel string is dried up. Then they make a large fire round the house, which almost suffocates both mother and infant. After this all the relations of both husband and wife gather together and bring presents; then the feasts begin and continue for two days. The husband comes to the house, and the couple are rubbed well over with cocoanut oil, and then deck themselves with native ornaments and beads, and then are presented to the gathering. Of course this only takes place on the occasion of the first-born, as the eldest always takes his father's place at his death. Sometimes it happens also that single girls get *enceinte*; then they often resort to abortion.

¹ (Lat. 9° 5' S.; Long. 152° 46' E.)

This is done in the following manner:—The girl goes to her mother, or some other old woman who practises witchcraft. The girl has to lie on her back, and the woman presses in the direction of the womb till it almost gives a loud report (*sic*), when, as a rule, the child is killed. This practice is not only done by single girls, but by young married women also, who dread the pains connected with child-birth.

CLASSIFICATION OF NATIVES.—As there are seven different islands so there are also seven different communities, which they call Kuhms: they consist of the following:—1, Meres; 2, Schmauis; 3, Lekusis; 4, Kumuro; 5, Kunithau; 6, Fretock; 7, Jabes. If ever a disturbance occurs, which not unfrequently happens between two or three of the villages, the others look on or make peace. In marriage they seldom or never marry in their own village, but from any of the other of the six villages. The father has nothing whatever to do with the children; they belong to the mother. Should the father die, all his belongings, such as coconut trees, &c., go to his relations; the children or mother get nothing. Should the mother die, the children and relatives divide while the husband gets nothing. The same law holds good for Woodlark Island and for the Trobriands (Lat. 8° 35' S.; Lon. 141° 0' E.). Similar to civilised people, the Laughlan islanders believe in a future state. They also believe the spirits of their deceased friends or relations go to Wartheum, a small island in the Trobriands Group. This is supposed to be the native paradise, as they have no work to do, only eat, drink, and sleep, which seem to be the things most appreciated by them. There is also supposed to live an old woman in Wamana, another small island, who is said to sleep six days out of seven. Sometimes she goes to Wartheum to visit her parents. When she returns to the Laughlan Islands she often describes how pretty it is there, and she wished to remain in Wartheum; but her parents would not allow her, and tell her to return to her husband and family.

SPORTS.—In the time when most of the canoes leave for Woodlark Island those left behind—principally the women—devote their time to various amusements. The principal of these is to make a great sandhill on the beach in the moonlight; then they sit on it and sing and defy the men to pull them off.

At first the latter do not respond, but by-and-by they appear one by one, and make a similar sandhill. Of course the numbers must be equal on either side; then both sides begin to sing; suddenly one of the men makes a dash and seizes one of the women, then all her companions try to rescue her; the men also go to assist their side. A general wrestling then begins, which usually ends in someone being more or less seriously injured. This amusement from a European point of view is not very interesting, but seems to be the favourite pastime.

SEA-WATER.—Sea-water seems to play a great part in the preparation of their food, as they do not understand the extracting the salt from the water. They also use it as

medicine, &c. The stomach seems to be the seat of all ailments. For instance, if the husband and wife have a slight discussion, both of them have to drink salt water until their dispute is settled, &c. When a woman is *enccinte* she is also to drink a large quantity of it, as it is supposed to strengthen the child. No one is believed to die a natural death unless he is killed; if one should die through sickness he is certainly supposed to have been bewitched, and mostly the old women are credited with it, as they are supposed to enter the body and bite the intestines with their teeth, or else put a stone in the stomach. Should one get seriously sick all the friends and relations meet together and make an infernal noise to drive away the evil spirit. On these occasions the dogs and children join in, while the men throw spears in all directions, and the sick man goes "bung." They are also very superstitious as regards dreams; what they dream of at night they firmly believe will take place. They are very frightened of death in spite of the happy times held out to them at Wartheum. Should anyone have toothache or headache he has to hold a piece of tortoise shell in his mouth until he is relieved. Stomach-aches and headaches are also supposed to come from the stomach; in those cases an old woman is generally called in to extract the stone. The first proceeding is to chew betel nut, the next to pass a charm over the spot; then the old woman gently passes her hand over the painful part, and usually on the third or fourth movement a stone falls from her hand. To expose this has been a difficult matter, as no one was willing to come forward to dispute it.

THE MOON.—The moon was formerly part of the earth, and is at present considered to be an old woman; the stars are also bad old women to whom admittance to Wartheum has been refused, and whose punishment it is to watch the moon. In olden times the woman used to keep the moon in a basket and guard it very jealously, even from her children; then when she went out at night she opened the basket and by the moonlight was guided on her visits to Wartheum. As long as the children were small all went well, but as they grew up her disappearance at night and the light following her roused their suspicion. They watched and saw how the mother put the moon ("debnkon") in her basket. They then spoke to the mother about the light and asked her to let them see it. She at once got very angry, and told them not to inquire into it any further; but as they persisted she suddenly rose in the air, since which time all nations have a moon. The stars are supposed to watch the moon so that the old woman is unable to replace it in her basket; otherwise they would have no moonlight for their singing and dancing. Whenever they see a shooting star they make a great noise, as they believe that it is the old woman who keeps the moon come down to the earth to catch somebody to take her place so that she might go to Wartheum.

FIRE.—In olden times there were seven old women living at Woodlark Island in harmony. They used to till their gardens and live a happy life; the only drawback they had was the want of

fire, in consequence of which they suffered greatly from ulcers and sores, as they had to eat their food raw; but one of them knew the secret of making fire, which kept her in good health, as she was able to cook her food; for a long time she kept her secret from the others, but eventually they found out and got very angry with her and left her. They said, "you are greedy 'schmaui.'" The others then left Woodlark Island and settled on the Laughlans, each of which islands bear their names, viz., Meres, Lekusia, Komoro, Kunithau, Tretoek, and Labes. It is also the habit to give young boys the head of a snake to eat, to make them brave and fearless in warfare.

Aboriginal dialects of Bula's, Domara-Mairu, Dabu, Nada, Nala, Sinangolo, and Toaripi are given, the system of orthography being that adopted by the Royal Geographical Society, &c.

"Science in Plain Language. Evolution. Astronomy, Food, Physiology, &c." By William Durham, F.R.S.E. (Adam and Charles Black, 1891.) 8vo. pp. 123. The author in the preface states that the work is intended for "intelligent and thoughtful people who have not the time, nor perhaps the inclination to read regular scientific works, but who nevertheless would be glad to know the general results of scientific investigation if that knowledge could be imparted to them in plain every-day language without too much detail." The scheme of the work is well carried out, the principal articles being on natural selection, protoplasm, colour, movement, the sun and moon, the earth, stars, nebulae, &c., planets, astronomical speculations, tides &c., foods, and physiology.

"Illegitimacy and the Influence of Seasons upon conduct." By Albert Leflingwell, M.D. (Swan Sonnenschein, 1892.) 8vo. pp. 160. The volume contains two essays, the first is devoted to a consideration of illegitimate births in the different sections of the British Isles, the second being an attempt to present to the reader certain phenomena of periodicity in human conduct and mental disease, which, although for many years familiar to students, are still comparatively unknown to the general public. The work contains a large amount of statistics, and the coloured diagrams appear to have been very carefully prepared. On page 12 a table is given, "Of each thousand children born in England, Scotland, and Ireland, how many were illegitimate?" The numbers for 1889, were:—Ireland 28, England 46, Scotland 79.

"The Faiths of the Peoples." By J. Fitzgerald Molloy. (London: Ward and Downey, 1892.) 2 vols., 8vo., pp. vi, 251, vi, 218. In this work, which is unfortunately controversial in tone, Mr. Molloy describes visits to some seventeen out of the hundred and odd places of worship on the list of the Registrar General. Judaism, The Children of Islam, The Irvingites, The Southcottians, and the Comtists are amongst those sects described in the first volume; while in the second volume, the author

Anthropological Miscellanea and New Books.

his experiences of the Swedenborgians, the Quakers, the Salvation Army, the Seventh Day Baptists and others. The book is exceedingly interesting and well written, but it cannot be considered in any sense scientific, and the author's statements are not invariably to be relied upon; he has, however, evidently tried to write impartially, and if he has not altogether succeeded, it is but one more proof of the immense difficulty of the subject of religion from a scientific point of view, and shows how necessary it is that all accounts of "services," "ceremonies," or "ritual," should be from the pen of an educated believer in the particular form of worship which they profess to describe; *mutatis mutandis*, the same remarks apply, of course, to the investigation of the religions of "savages."

"Egyptian Science from the Monuments and Ancient Books treated as a General Introduction to the History of Science." By V. E. Johnson. (Griffith and Farran, London.) 8vo. pp. 198. The three questions which the author sets himself to answer are: (1) What was the amount of scientific knowledge possessed by the Egyptians? (2) What were the means whereby they or others, as the case may be, acquired this knowledge? (3) Was this knowledge, small or great, entirely of their own acquisition? The state of knowledge in ancient Egypt with regard to astronomy, mathematics, medicine, engineering, chemistry, natural philosophy, and cognate sciences is carefully considered, and the latter part of the work describes the foundation of the Alexandrian school, science during the middle ages, and the dawn of modern science.

"Text Book of Psychology." By William James, Professor of Psychology in Harvard University. (Macmillan.) 8vo. pp. 478. The volume consists of an abridgment of the author's larger work "The Principles of Psychology" in order to make it more directly available for class-room use. The definition of Psychology is given, in the words of Professor Ladd, as "the description and explanation of states of consciousness as such," and is treated under the headings—sensation in general, sight, hearing, touch, motion, functions of the brain, habit, the self, association, imagination, reasoning, will, &c. The author concludes by stating that at present psychology is in the condition of physics before Galileo and the laws of motion, of chemistry before Lavoisier and the notion that mass is preserved in all reactions. The work is well indexed.

"The Evolution of Mind in Man." By H. M. Medlicott. (Kegan Paul.) 8vo. pp. 48. The author states that the paper pretends to be a serious contribution to natural science where it merges into metaphysics and philosophy. On the practical and popular side notice is also taken of the religious bearings of the question.

"Chinese Characteristics." By Arthur H. Smith. (Paul.) 8vo. pp. 427. The work deals fully with many of the characteristics of the Chinese, but "the reader is warned that these papers are not intended to be generalisations for a whole empire, nor yet comprehensive abstracts of what foreigners have observed and experienced. What they are intended to be is merely a notation of the impression which has been made upon one observer. . . . It has been said that there are six indications of the moral life of a community, either of which is significant; when they all agree in their testimony they afford an infallible test of its true character. These are: (1) the condition of industry; (2) the social habits; (3) the position of the woman and the character of the family; (4) the organisation of government, and the character of the rulers; (5) the state of public education; (6) the practical bearing of religious worship on actual life. In the discussion of the various characteristics of the Chinese which have attracted our notice, each of the foregoing points has been incidentally illustrated." The author brings the experience of 18 years to bear on the subject, with which he appears to be very fully acquainted.

"The Philology of the English Tongue." By John Earle, M.A., Professor of Anglo-Saxon in the University of Oxford, 5th Edition. (Oxford, at the Clarendon Press.) 8vo. pp. 744. The author in the preface to the first edition states "There are two chief ways of entering upon a scientific study. One is by way of principles, and the other is by way of elements. . . . The other (latter) method is by the examination of a single language; and here the course of treatment follows the order of natural growth, introducing the principles in an occasional, an incidental manner, just as they happen to be called for in the course of the investigation. If the object language be the learner's own vernacular, this course will be something like climbing a mountain where the slope is easiest. When this path is chosen the complete and compact view of principles as a whole will be deferred until such time as the learner shall have reached them severally by means of facts which lie within his own experience. It is upon this, which may be called the elementary method that the present manual has been constructed. . . ." The titles of the sections into which the work is divided are: A historic sketch of the rise and formation of the English language; of the alphabet; spelling and pronunciation; of interjections; of the parts of speech; verbal group; of presentive and symbolic words; the noun group; the numerals; the pronoun group; of prepositions; of conjunctions; of syntax; of compounds; of prosody. Three very prepared indices are added. "The position which our language assumes in the comparative scheme is remarkable and peculiar. Starting as one of the purest and least mixed of languages, it has come to be the most composite in the world. And the peculiar greatness of the English language is inseparable from this

characteristic. Languages there may be which surpass ours in his or that quality, but there is none which unites in itself so many great qualities, none in which functions so diverse and various co-operate harmoniously, none which displays so full a compass of the powers and faculties of human speech."

"Marriage and Disease, a Study of Heredity and the more important Family Degenerations." By S. A. K. Strachan, M.D., London. (Kegan Paul, Trench, Trübner and Co., Limited.) 1892. pp. viii, 326. In this work the author draws attention to the large amount of physical and mental disease which exists amongst us, due to the hereditary transmission of pathological taints, arising from the deteriorating influences of civilisation. In primitive states of society, nature tends to eliminate these conditions, owing to the large number of weakly persons who perish in the struggle for existence; but among highly civilised nations, this safeguard is greatly lost, and by the care bestowed on the weak, inherited pathological defects are more or less fostered. While the greatest care is taken in improving the breed of our domestic animals, very few persons appear to give any attention to what may be called the physical, moral, or mental inheritance of our children; indeed the ignorance of even the so-called educated public of the laws of hereditary transmission, as applicable to themselves, is appalling. The author hopes that when young persons are acquainted with the responsibility resting upon those of them who are suffering from diseases which will inevitably be transmitted to their posterity, some of them, at least, may be induced to pause before becoming the means of calling into existence creatures doomed to sorrow and suffering, and ultimate extermination. Again, there is a much larger class in whom the pathological taint is much less strongly marked, who by the selection of suitable partners, may give origin to a fairly healthy progeny; to this class he considers instruction as to how they should act, of great importance.

With these aims in view, the author first explains what is meant by heredity, and then treats successively of the causes of variations in families, acquired characters, the tendency to reversion, and to build up new characters or, in other words, evolution. He next proceeds to consider the laws of heredity, and heredity in disease, beginning with heredity in insanity, and the consequences of marriage when such disease exists. Marriage in relation to drunkenness, epilepsy, syphilis, deaf-mutism, cancer, tubercular disease, gout, and rheumatism are successively dealt with. The consequences of early marriages and the evil effect they produce upon the offspring resulting from them are pointed out; the similar effect of marriages late in life upon the progeny and how the baneful influence in such cases may best be neutralised are considered. Consanguineous marriages are also discussed by the author, who considers that although they may not be detrimental, so long as there is no taint present, and indeed, may even be the

means of developing valuable characters which would otherwise be very liable to disappear. Such marriages are in all cases dangerous and not to be advocated for the reason that few families are physiologically perfect (most having some hereditary taint), and that the introduction of fresh blood has a very beneficial effect upon the family or race.

The author concludes his work with a chapter each on Instinctive Criminality, and on some of the less important hereditary affections.

The work as a whole is interesting and instructive reading, but whether its perusal will have the effect of influencing the course of life of any to whom what it contains applies, is doubtful, as in most of these cases the future has, we are afraid, to take care of itself. (J. G. G.)

"Yorkshire Folk-Talk." By M. C. F. Morris. (Frowde). 8vo. pp. 408. The scheme of the work is best explained by the following extract from the author's preface: "Not only am I desirous of gathering together any lingering traces of bygone words, but also of collecting peculiar Yorkshire phrases, sayings, modes of expression, and grammatical usages. Far less has been written about these than about mere dialectic vocabularies, and yet I think it will be admitted that to a Yorkshireman at all events they possess a certain interest." The volume deals fully with the grammar, pronunciation, folk-talks, Danish comparisons, customs, superstitions, &c. A full glossary is given.

"A Primer of the Gothic Language." By Joseph Wright. (At the Clarendon Press.) 8vo. pp. 247. The work is an elementary grammar written on the lines of the author's "Old and Middle High German primers." A short list of the most important works relating to Gothic is given, together with a glossary of all the Gothic words in the text.

New English-Italian and Italian-English Dictionary containing Commercial, Scientific, Technical, Military and Nautical terms. By B. Melzi. (Hirschfeld.) 8vo. pp. 608.

Collections for a Lexicon in Luganda and English and English and Luganda. By P. O'Flaherty (S.P.C.K.) 8vo. pp. 41.

The Naturalist in La Plata. By W. H. Hudson. (Chapman and Hall.) 8vo. pp. 388. Illustrated. The volume contains a series of most careful notes on the fauna of La Plata; some of the more important chapters relate to the puma, some curious animal weapons, mimicry and warning colours in grasshoppers, the death-feigning instinct, horse and man, &c. The illustrations are well reproduced, and there is a good index.

Easter Island, Smithsonian Report, 1888-9, pp. 447-552. 48 plates. By W. J. Thomson. The paper is the result of the visit of

the U.S. vessel "Mohican," in 1886. A most careful and exhaustive description of the island, its antiquities and inhabitants is given and the illustrations leave nothing to be desired. The author states, with regard to the statues, "The images were designed as effigies of distinguished persons and intended as monuments to perpetuate their memory. They were never regarded as idols, and were not venerated or worshipped in any manner." A careful account is also given of the ancient language.

"Journal of the Anthropological Society of Bombay," vol. ii, No. 5. On some festivals to village goddesses, by F. Fawcett.—Mantrams, spells, amulets.—"The Times of India" on the age of consent controversy.—The pongal feast.—The recent Royal marriage at Kolhapore. No. 6. On Basivis: women who through dedication to a Deity assume masculine privileges. By F. Fawcett.—Tables of caste measurements, by E. J. Kitts.—Hindu matrimonial rites in Madras, by C. P. Sreehurry Naidoo.

Proceedings of the Royal Society of Victoria, vol. iii. (New Series.) Anthropology in Australia, by A. W. Howitt.—The New Britain currency or shell money, by R. H. Rickard.—The Dukduk association of New Britain, by R. H. Rickard.

Proceedings of the Philosophical Society of Glasgow, vol. xxii. On language, by F. Max Müller.—Iceland; some sociological and other notes, by James Mavor.—An inquiry into the nature of heredity, by William Wallace.

Folk-Lore, vol. ii, No. 4. Notes on the religion of the Apache Indians, by Capt. J. G. Bourke.—Samoa stories, by Hon. J. Abercromby.

The American Antiquarian, vol. xiv, No. 1. The water cult among the Mound builders, by S. D. Peet.—The antiquities of British Columbia.

Bulletin de la Société d'Anthropologie de Bruxelles, vol. ix. A new prehistoric village in Hesbaye, by M. de Puydt (2 plans.) The prehistoric station of l'Hermitage at Huccorgne by MM. Dormal and Tihon (1 plan).—On some dolmens in Belgium and specially these of Weris and Forrieres, by M. Cloquet.—Notes on stone implements of the quaternary period, by M. Cels (1 plan).—Exploration of grottos in the valley of the Meuse, by M. Tihon.—Some religious beliefs in the stone age, by M. Goblet d'Alviella.

L'Anthropologie, vol. ii, No. 6. The change of the animal into the human skull, by P. Topinard.—Prehistoric skulls from Larzac, by G. de Lapouge.

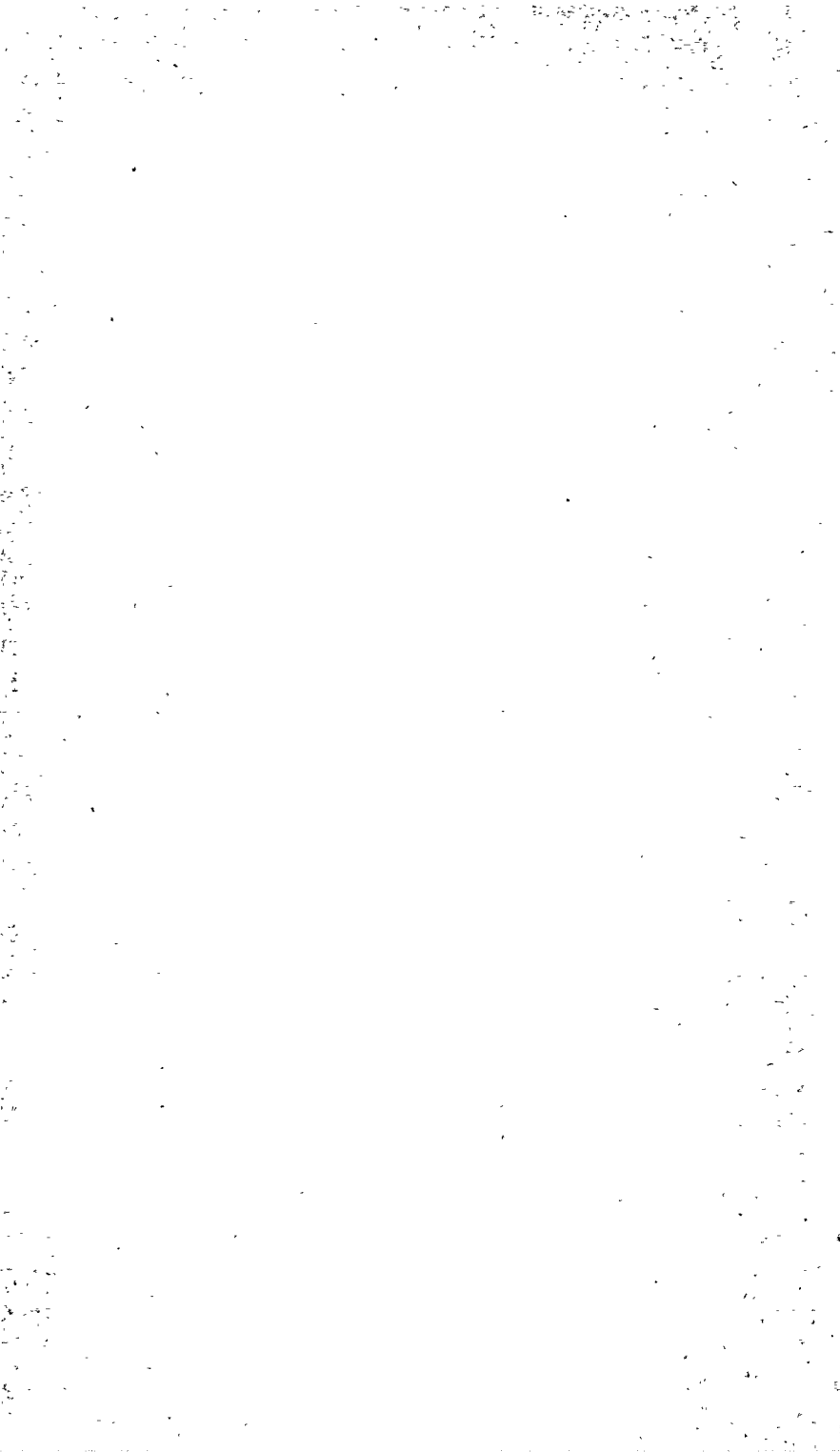
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Anthropology at the Committee of Revision. The Pre-Columbian Ethnography of Venezuela; the Goajires Indians, by Dr. Marciano.—Popular superstitions; passing a sick child across the trunk of a tree, by Béranger-Féraud.—Typical arrow-points from Fère-en-Tardenois (Aisne), by E. Viellé. 1891, Part 1. The Orangs-Koubous, by Capt. Zelle.—The small birth-rate in France, with numerous tables.—The administration of Justice in Ancient Egypt (continued), by Ollivier-Beauregard. Part 2. Prehistoric flint workshops at Liercourt and Erondelle (Somme), by O. Vauvillé.—The small birth-rate in France (continued).—Pre-Columbian Ethnography in Venezuela, with notes on the Cuicas and Timotes, by Dr. G. Marciano.—Prehistoric flints from the Ardèche, by Dr. P. Raymond.—Discussion on the small birth-rate in France (continued). Part 3. The whistling language of the Canaries, &c.

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"*Bulletin de la Société d'Anthropologie de Lyon*," vol. ix, No. 2. On the discovery at the mines of Pranal of several prehistoric shelters, by A. Brihat (illustrated).

"*On Crude Jadeite in Switzerland*." Dr. A. B. Meyer sends the following note on his communication on pp. 319, 320:—On page 320 of my note (line 11) it was erroneously stated that a pebble of nephrite had been found on Heligoland. It must have been near Stubbenkammer in Rügen that this piece (which is now in the Academical collection in Saxony) was found in the year 1876. The microscopical investigation has proved that it belongs to the same type of nephrite as the celebrated block from Schwemsal in Prussia. All boulders in Schwemsal as well as on Rügen are of Scandinavian origin and the four crude pieces of nephrite which are now known as coming from Northern Germany, namely, Stubbenkammer, Suckow (near Prenzlaw), Potsdam, and Schwemsal lay in a direction N.N.E. and S.S.W. from each other when found. This is exactly the same direction indicated by all boulders in Northern Germany which are transported by ice from Scandinavia. (See particulars in my paper, "Neue Beiträge zur Kenntniss des Nephrit und Jadeit," in *Abh. u. Ber. des K. Zoo.-u. Anth.-Eth. Mus. zu Dresden*, 1890, 1891, No. 4, p. 6 *et seq.*)



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